



# ***JPRS Report***

## **Telecommunications**

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# Telecommunications

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26 December 1991

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**SCC, Arianespace Agree on Replacement Satellite Launch**

*OW2911113891 Tokyo KYODO in English 1046 GMT  
29 Nov 91*

[Text] Tokyo, Nov. 29 KYODO—Space Communications Corp. (SCC), a Japanese communications firm in the Mitsubishi business group, announced Friday it has reached an agreement with the French Arianespace Company for the launching of a substitute for its "Superbird A" satellite, which went out of operation last December.

The new satellite "A" is scheduled to be launched in December next year and to start operating in February 1993, SCC officials said.

SCC, set by Mitsubishi Corp. and other Mitsubishi affiliates in 1985, also plans to launch a second "B" satellite next February. It, too, will be launched from French Guiana by an Ariane rocket. An earlier "B" launching failed in February last year, the officials said.

The new satellites will be manufactured by Space Systems Loral of the United States, they said.

The satellites, both with solar cell wings and 34 transponders each, will weigh 2,550 kilograms each at blast-off and should last 10 years, they said.

**Data Bank Information Service Operational in TASS**

*LD1812201991 Moscow TASS in English 0622 GMT  
18 Dec 91*

[Text] Moscow December 17 TASS—TASS News Agency has introduced a new subscription data bank service presented on Tuesday in the TASS headquarters.

The new service is organized according to an agreement between TASS and the French agency Genie Logiciel to further expand the Minitel world data bank service, which has ten million subscribers in Europe, North America, Asia and Africa.

Now that TASS has joined the Minitel network, each French family, possessing a special telephone display unit, will receive live TASS information by dialing 36—17 TASS.

The TASS—Minitel service has been organized within the information for data banks editorial board, which prepares about 40—60 items a day on politics, economics, science and technology, culture and sports. In future information in languages, other than French, is envisaged.

French ambassador to the Soviet Union Bertrand Dufourcq who attended the presentation, wished the new service all the best in order to bring the French and the Soviet people closer together.

**TASS Device Allows French Citizens To Monitor Reports**

*LD1612183891 Moscow TASS in English 1552 GMT  
16 Dec 91*

[By TASS correspondent Viktor Khrekov]

[Text] Paris December 16 TASS—Every French family can now receive the TASS information service in their own home through a special device attached to the country's telecommunications network, the Minitel information service said.

The service established ten years ago helps people book train, plane and theater tickets, provides a shopping service and distributes information.

There are about six million Minitel terminals in France, which are distributed without charge by the France Telecom Company.

The TASS service can also be received in Germany, Spain, Italy, the United States and Japan, director-general of the AGL [expansion unknown] firm said.

TASS signed a contract with the firm a year ago to distribute its information for French newspapers, magazines and radio stations.

**BBC Broadcasts on Radio Rossii Welcomed**

*PM1012145791 Moscow ROSSIYSKAYA GAZETA (First edition) in Russian 6 Dec 91 p 3*

[Article by Andrey Baranovskiy: "BBC Pursuing the Airwaves"]

[Text] For two months now some BBC programs have been transmitted on Radio Rossii frequencies. And from January next year Radio Rossii will transmit two 30-minute programs of the BBC's Russian Service prepared in London with the participation of Russian radio employees.

This is gratifying news. Because the daily volume of Russian-language broadcasting by the BBC World Service itself is very small—just 8 hours 15 minutes a day. It was only during the August putsch that it increased to 16 hours. Incidentally, this was the station that Gorbachev listened to during his imprisonment at Foros. Probably not just because it is always clearly audible but also because the BBC's main rule is to give information first even if that information is not advantageous to Britain. When Britain lost two battleships at the beginning of World War II during the opening engagements the BBC was the first to report on the Royal Navy's losses.

At the foreign literature library the BBC is opening a permanent exhibition which, among other documents, will show Russian language manuals used in its radio language lessons. These books are for British businessmen who want to try their hand at Russian. For Soviet businessmen the BBC is preparing a weekly "Marshall Plan" for the Mind program, which will contain the basics of banking skills and lessons on small and medium business management. The lessons will be given mainly by British businessmen with experience of work in the Russian market.

**Azerbaijan President Receives Iranian Foreign Minister**

*OW0412143791 Moscow INTERFAX in English  
1235 GMT 4 Dec 91*

[From "Bulletin 1"; following item transmitted via KYODO]

[Text] Iranian Foreign Minister 'Ali Akbar Velayati had a meeting with President Ayaz Mutalibov of Azerbaijan in Baku yesterday, during which he suggested setting up Azerbaijani-Iranian joint ventures to develop oil and gas fields in the Caspian.

Both sides expressed interest in the opening of flights between Tehran and Baku via Tebriz and sea lines between Enzeli (an Iranian port on the Caspian) and Baku.

Mr Velayati and Mr Mutalibov reached an agreement on the opening of a branch of one of the Iranian banks in Baku and on the creation of reliable television, radio, and telephone communications systems between Baku and Tehran.

Mr. Velayati refuted the recent report in Izvestiya to the effect that Iran was unwilling to recognize the independence of Azerbaijan.

#### **Latvia, Sweden Sign Radio Cooperation Agreement**

*LD1912203791 Riga Radio Riga Network in Latvian  
0630 GMT 15 Dec 91*

[Text] Although Latvia and Sweden have an ancient historical past, we each know little about each other. That is the view of the directors of Latvian and Swedish Radio. That is why yesterday in Riga, Janis Ozols, chairman of the Latvian Radio and Television Committee, and Karin Nilsson, director of external relations of Radio Sweden, signed a cooperation agreement, provisionally for three years. However, if all goes according to plan, it will in any case be extended.

#### **Fiber-Optic Cable To Connect Finland, Estonia**

*92WT0034A Helsinki HELSINGIN SANOMAT  
in Finnish 7 Nov 91 p B 11*

[Unattributed article: "Telecom Builds Photo-Optic Cable From Helsinki to Tallinn"]

[Text] Telecom, Ptl, and the Estonian national telecommunications company, Estelcom, agreed Wednesday to build a photo-optic connection between Helsinki and Tallinn.

The photo-optic cable, completed in a little over one year, will be Estonia's first digital connection to the rest of the world.

At the same time, a fiber-optic cable between Turku and Stockholm will be finished. It will connect Finland and Estonia to a worldwide photo-optic cable network. Fiber-optic cable can handle a considerably larger amount of traffic.

Estonia is now connected to Finland's telecommunications network by an 1,800-channel radio link between Helsinki and Tallinn. In addition, between Finland and Estonia there is a copper cable laid into the sea during World War II.

#### **Finland-Murmansk Long Distance Calling Automated**

*92WT0034B Helsinki HELSINGIN SANOMAT  
in Finnish 8 Nov 91 p 5*

[Unattributed article: "Automated Phone Connections Between Finland and Kola"]

[Text] Lapin Tele and the Murmansk telecommunications company's joint venture, Tele-Nord, is currently building an automated telephone connection between Lapland and Murmansk. The link, completed by early March, improves international long distance and communication connections. During next year the first support stations for mobile telephone traffic will also be completed on the Kola peninsula. The Kola area is estimated to have around 100 subscribers.

In addition to normal telephone service the link also facilitates telefax and video conference communications. The number of subscribers to these services on the Kola peninsula is expected to be around 50. The current manual telephone connection between Kola and Lapland is badly congested. The connection was built to serve the needs of air traffic started two years ago.

#### **Competition in Finland-Estonia Phone Traffic**

*92WT0035A Helsinki HUFVUDSTADSBLADET  
in Swedish 8 Nov 91 p 11*

[Unattributed article: "Helsinki Telephone Company Breaks Monopoly"]

[Text] The Helsinki Telephone Company (HTF) has been granted a concession for telephone communications between Finland and Estonia. The Finnish Government changed the terms of the concession last Thursday.

HTF thereby becomes the first competitor to break the monopoly of Tele in telecommunications between Finland and foreign countries. CEO Kurt Nordman does not want to comment on whether this competition also includes the pricing on international telephone calls. "The main issue is not inexpensive connection, but to be able to connect, period," he said.

The concession makes it possible to call Estonia via HTF's international lines, even if the call is placed from outside HTF's purview. HTF does not, however, have the right to transfer telephone calls from Estonia to the rest of the world.

#### **Joint Operation**

HTF expects the new connections to be used mainly by the growing number of Finnish-Estonian joint ventures. The Finnish Telephone Company is also collaborating with Tallinn Telefonivork. HTF has announced that its initial intention is to open a 480-channel radio link between the peninsula of Porkkala and Tallinn. The connection will eventually go through a cable.

The Traffic Ministry's estimate is that the gross income from telecommunications between Finland and Estonia initially will amount to between 2 and 3 million markkaa



per year. After three to four years the gross revenues will increase to between 4 and 6 million markkaa per year.

The Finnish Government intends to interfere in the concession if HTF does not commence telecommunications between Finland and Estonia before the end of 1993.

HTF has not yet decided, according to Nordman, how much to invest, but we are probably talking of about 10 million markkaa.

#### Resistance

Tele, which the day before yesterday announced its intention to install an optical cable between Finland and Estonia, takes a very negative stance toward the concession application by HTF. The Foreign Ministry also objected to the concession change. The Finnish Telephone Administration, however, supported it.

The Foreign Ministry based its opinion on the fact that Eesti Telekom, according to a letter received by the ministry, has a monopoly on international telecommunications from Estonia. The Finnish Embassy in Tallinn confirms that the above-mentioned organization corresponds to Tele in Finland.

The Finnish Government does not want to comment on which Estonian organization is entitled to control international telecommunications. The concession is a necessary requirement but not a sufficient prerequisite for the right to telecommunications between the two countries.

The Estonian telephone system is in bad shape. The Swedish Telecommunications Administration recently signed a preliminary agreement to aid Estonia in acquiring and installing telecommunications technology. This project will cost many billions of markkaa.

#### NMT Telephone Exchange

The Finnish Tele and Estonian Telephone Company, EMT, last Thursday signed an agreement, according to which Tele will acquire a new NMT-450 telephone exchange and lease it to EMT. The telephone exchange will be delivered by Oy L.M. Ericsson.

Installation will commence in December and the telephone exchange in Tallinn will start operating in April of 1992, according to a spokesperson for Ericsson.

**Finnish Firm Lands \$40 Million Telecom Deal**  
*WA0612132091 Hong Kong SOUTH CHINA MORNING POST 22 Oct 91 p 1*

[Article by James Riley]

[Text] Hongkong Telecom CSL has selected Nokia Cellular Systems of Finland to supply network equipment for its planned digital mobile service, a source within the company said.

It is believed the deal may be worth as much as US\$40 million over the next three to five years.

The source said the company was delaying an official announcement on its hardware decision until Hongkong

regulators made public precisely how they intended to regulate the transition from analogue to digital cellular.

But the company is understood to have already signed a letter of intent with Nokia, with the deal subject only to Telecom CSL being granted the appropriate licence to operate a digital cellular network by Post Office regulators.

Telecom CSL mobile unit director Ian Stone said the company hoped to start constructing the network—to be based on the European GSM (Groupe Special Mobile) standard—in the first quarter next year.

The company would then offer a full GSM service by early 1993, Mr. Stone said, with early testing of the Nokia system already underway.

Hongkong Telecom CSL intends spending more than HK\$200 million on digitising its mobile service over the next two years and will invest from \$500 million to \$600 million over the next six years.

Earlier this month, another local operator, Pacific Link, announced it had entered an agreement with the European firm Ericsson for the supply of a digital cellular system in a deal that could total US\$40 million.

Pacific Link said its network would be based on the US-designated ADC (American Digital Cellular) standard.

Hongkong's largest cellular operator, Hutchison Telecommunications, was taking a far more cautious approach to the introduction of digital services.

Hutchison's group planning director Robin Maule said there were still too many uncertainties about how the Government planned to divide available frequency spectrums for any decision to be made on how and when, or even if, it should digitise its network.

Mr. Maule said there were also too many uncertainties about the direction digital standards were taking to make realistic commitments about digitising the Hutchison network.

While GSM held great promise, Mr. Maule said Finland was the only country in the world with an operational network. He said network equipment remained commercially untried and said customer equipment—the handheld telephone sets—was not yet available in volume, with mass-produced competitively viable sets still at least six to 12 months away.

Mr. Stone said that by early 1993, the date set by Hongkong Telecom CSL for the introduction of its GSM network in Hongkong, a more than adequate choice of competitively priced consumer products would be available for the network.

Mr. Maule said one of the great hopes of the GSM service lay in its standardisation throughout Europe. Once GSM was established, Hongkong Telecom CSL would offer a mobile roaming service for customers travelling virtually anywhere in Europe, including Britain.

Regardless of when technical issues were resolved, operators still have to wait for the Government, which is

pondering the question of how to regulate the switch from analogue networks to digital.

### **Arianespace To Launch 2 Japanese Telecom Satellites 1992**

*AU2911111291 Paris AFP in English 1052 GMT  
29 Nov 91*

[Text] Paris, Nov 29 (AFP)—European Ariane rockets will launch two Japanese telecommunications satellites next year from the French base at Kourou, Guiana, the Arianespace firm reported here Friday.

It said the two payloads, Superbird-B to be launched early in 1992 on Ariane's 49th flight, and Superbird-A to be put into orbit late next year on the rocket's 56th mission, would belong to Japan's Space Communications Corporation.

The 2,550-kilogram (5,610-pound) satellites built by Loral Space Systems of Palo Alto, California, will provide 10 years of telephone, telex, data and television transmission from geostationary orbits, the company said.

They will replace the V-31, which ceased to function several months after being put in orbit in June 1989, and the V-36, lost in the explosion of the 36th Ariane rocket in February 1990, it said.

With the signing of the latest contract—for Superbird-A—the company has, as of Friday, 34 launchings planned, worth a total 14.9 billion (2.7 billion dollars), Arianespace said.

### **Finnish Telecommunications Group To Help Estonia**

*LD1512115191 Helsinki Suomen Yleisradio Network  
in Finnish 1600 GMT 9 Dec 91*

[Text] The Finnish Post and Telecommunications Company has signed an agreement with the Estonian National Telecommunications Company, Estelcom, offering telecommunications connections to enterprises and establishments in Tallinn.

According to the agreement, Finnish telecommunications will rent out network capacity for the Estelcom's use. Enterprises and establishments that have signed an agreement with Estelcom can call from Tallinn to the country of their choice as if calling abroad from Finland. Correspondingly, customers who have signed the agreement can receive telephone calls from abroad as if calling to Finland.

It is estimated that by the end of the year there will be about 100 customers using the service. The number of connections will be increased in the future based on demand.

### **Satellite Communication Links With Turkmenistan Planned**

*TA0312081591 Ankara Turkiye Radyolari Network  
in Turkish 2100 GMT 2 Dec 91*

[Excerpt] [passage omitted] The official Turkish-Turkmen talks were held in Ankara today. In a press release on the talks, presidential spokesman Ambassador Kaya Toperi said that the development of relations and cooperation in every possible field in the light of the close historical and

cultural ties between Turkey and Turkmenistan were discussed during the talks. According to Toperi's statement, Turkey will provide transportation and communications links to Turkmenistan via satellite. Projects will also be initiated in the fields of petroleum and natural gas in a bid to develop economic and commercial cooperation. Turkey will transfer know-how to Turkmenistan to allow the latter to benefit from Turkey's model of small and medium-size businesses. Moreover, Turkmenistan will be provided with the know-how applied in connection with the banking, insurance, and free market policies in Turkey.

### **Serbian PTT Signs French Telephone Agreement**

*LD1212173291 Belgrade TANJUG in English  
1410 GMT 12 Dec 91*

[Text] Belgrade, Dec 12 (TANJUG)—The postal, telegraph and telephone (PTT) company of the Yugoslav Republic of Serbia has signed an agreement with Alcatel (public telephone systems) of France on the purchase of 11 telephone exchange systems with the capacity of 140,000 telephone lines, the Serbian Information Ministry said today.

The agreement, signed in Paris last Tuesday, creates conditions for setting up a joint company in Belgrade for the manufacturing of digital telephone systems E-10B [as received].

The first telephone exchange from the new series, Beograd-Centar, whose capacity will be 27,000 lines, should start functioning in the first half of 1992. The entire project should be completed 14 months later.

The project will enable Serbia's PTT system to operate with the most sophisticated telephone exchanges and to significantly improve the quality of its services, the Serbian Information Ministry added.

### **PRENSA LATINA, INA Sign Media Cooperation Protocol**

*JN3011204191 Baghdad INA in Arabic 2006 GMT  
30 Nov 91*

[Text] Havana, 30 Nov (INA)—INA and the Cuban news agency Saturday signed a protocol for cooperation that provides for exchanging newscasts to make use of them in the media and to facilitate the activities of reporters from both countries.

INA Director General 'Adnan al-Juburi signed the agreement for INA, while Pedro Sarguias [name as received], director general of PRENSA LATINA, signed for the Cuban agency.

The two directors made speeches, emphasizing the deep friendship that binds the two countries and their joint march [words indistinct] imposed by the United States and its allies.

The agreement stresses the eagerness of the two agencies to facilitate the activities of press delegations and exchange visits to promote press services.

**SABC Readmitted To European Broadcasting Union**

*MB1812170491 Johannesburg South African Broadcasting Corporation Network in English 1500 GMT 18 Dec 91*

[Text] The SABC [South African Broadcasting Corporation] has been readmitted to the European Broadcasting Union.

The secretary general of the union, Mr. (Jean Bernard Munsch), said the union's administrative board decided to allow the SABC as an associated member on the first of next month. Mr. (Munsch) said the decision was taken in view of the far-reaching changes which were taking place in South Africa, in general, and within the SABC, in particular.

The SABC left the union in the late seventies as a result of political pressure.

**SABC Chairman on Readmission To European Broadcasting Union**

*MB1912080591 Johannesburg SABC TV 1 Network in English 0500 GMT 19 Dec 91*

[Text] SABC [South African Broadcasting Corporation] Board Chairman, Professor Christo Viljoen, says the SABC's readmission to the European Broadcasting Union [EBU] could lead to greater cooperation and exchange of broadcasting expertise.

In a statement he said the move would mean greater access to a pool of radio and television programs. This follows the announcement yesterday by the secretary general of the union, Mr. Jean Bernard Munsch, that the SABC was being readmitted to the union on 1 January as an associate member. The EBU is a forum for European broadcasters which is concerned with the technical, administrative, legal and program aspects of broadcasting.

**ANGOP, Britain's REUTER Sign News Exchange Accord**

*MB3011143691 Luanda Radio Nacional Network in Portuguese 0600 GMT 30 Nov 91*

[Text] In Luanda yesterday, ANGOP and REUTER, its British counterpart, signed a news exchange accord. Under the terms of the accord, which was signed by the directors of the two agencies, REUTER will provide an African news service by [word indistinct] and install a satellite dish for ANGOP. That satellite dish will provide a news line of 300 [word indistinct] that can be easily recovered and processed by computer for editorial purposes.

**Telecommunications Agreement Signed With Sweden**

*MB1412060091 Maputo Radio Mozambique Network in Portuguese 1730 GMT 12 Dec 91*

[Text] In Maputo today, Mozambique and Sweden signed an agreement for the creation of a joint enterprise in the telecommunications sector. The enterprise will be called [name indistinct] and will have a capital stock of \$100,000 from [word indistinct] Telecom International, and from the Mozambique State Telecommunications Enterprise, CDM.

**PRC Media Delegation Meets Information Officials**

*BK1412154491 Islamabad Radio Pakistan Network in Urdu 1500 GMT 14 Dec 91*

[Text] A five-member delegation of the Chinese Central People's Broadcasting Station [CPBS] called on Dr. Tanvir Ahmad Khan, the secretary of the Ministry of Information and Broadcasting and chairman of Pakistan Television [PTV], in Islamabad today and discussed with him matters relating to cooperation between the PTV and CPBS. The delegation also separately met with the director general and the managing director of the PTV and visited the National Broadcasting House.

**Canadian Network Takes 20 Percent Share in TV3 Group**

*BK1812113391 Hong Kong AFP in English 0958 GMT 18 Dec 91*

[Text] WELLINGTON, Dec 18 (AFP)—Canada's biggest private television network, CanWest Global Communications, Wednesday bought a 20 percent share of New Zealand's only private network, the ailing TV3 group, receiver Keith Smith said.

The deal, to be made through an equity and debt investment in TV3, allows CanWest to increase its stake to 50 percent if it chooses.

CanWest will invest 10 million Canadian dollars (8.7 million U.S.) and will take over the management of TV3.

As part of the same deal Australia's Westpac Banking Corp. said it had agreed to lift its holding from 40 percent to 48 percent.

Westpac New Zealand general manager Bruce Alexander said the bank also held a right to raise its holding to 50 percent.

"Due to its recent success and the introduction of Westpac and CanWest as shareholders, the outlook for TV3 is very promising," Alexander said.

The initial shareholding will be Westpac 48 percent, CanWest 20 percent and the receiver will hold 32 percent.

TV3 hit the airwaves in November 1989 in competition against state-owned Television New Zealand's two channels, and more recently against a number of pay and regional stations.

At the time TV3 was 15 percent owned by NBC of the United States.

By May 1990, with financial problems mounting, TV3 asked Westpac to appoint a receiver.

Westpac now has a strong presence in television in both Australia and New Zealand as it owns the Ten Network, one of Australia's three commercial networks which also went into receivership.

CanWest is listed on the Toronto, Montreal and Winnipeg stock exchanges and owns four independent television stations and a regional network in Canada.

**Firm Signs Deal With Arianespace To Launch Satellite***BK1112021191 Bangkok BANGKOK POST in English  
11 Dec 91 p 19*

[Text] Shinawatra Computer and Communications [and] Arianespace recently signed the launch contract for Thailand's first telecommunications satellite, THAILANDSAT 1, at the Westin Stamford Hotel in Singapore.

THAILANDSAT 1 is the first of the new SDS (Spelda Dedicated Satellite) class defined by Arianespace to meet the specific needs of space telecommunications. This class of satellite averages about one metric ton at liftoff.

The satellite will be built by the Hughes Aircraft Company of El Segundo, Los Angeles (California), and will provide telephone, telex, data and TV transmission services for all of Thailand.

THAILANDSAT 1 marks the 10th launch contract signed by Arianespace in 1991. As of December 6, 1991, Arianespace had a backlog of 35 satellites to be launched, worth about \$2.7 billion.

**French-Aided Telecommunications Network Inaugurated***BK3011115591 Vientiane KPL in English 0932 GMT  
30 Nov 91*

[Text] Vientiane, Nov 30 (KPL)—A new telecommunication network built with French gratis aid was inaugurated here on Nov 28. The facilities include the new modern 34 magabite equipment of microwave linking Vientiane capital and Paksan (150 km south), costing 4.8 million francs and a new telex centre with 450 lines costing over 9.1 million francs.

The inauguration ceremony was presided by Mr. Thongsavat Paseut, deputy minister of communication, transport, post and construction and Mr. Daniel Dupont, French ambassador to Laos. Also on hand were high ranking officials including Mr. Bouathong, CTPC [Communications, Transport, Posts, and Construction] minister.

The French Government, in the next phase within the same framework, has already agreed to fund the installation of the microwave link between Vientiane-Luang Prabang-Oudomsai, which will cost about two million dollars.

**International Telephone Link Set Up in Phnom Penh***BK0712060491 Phnom Penh SPK in English  
0436 GMT 7 Dec 91*

[Text] Phnom penh SPK December 7—The international telephone service has been opened to the public, according to the Posts and Telecommunications Department.

It is the first time for Cambodia to inaugurate such public telephone operation as a joint venture with the Australian Communication Service (OTCI).

International calls can now be connected through the use of "phone ticket" at 15 phone-boxes installed in five different places. Of them, 10 boxes are at the Posts and

Telecommunications Department, two at "Bayon" satellite station, and the rest at the posts and telecommunications service of Don Penh Precinct, the Monorom hotel and the United Nations Advance Mission in Cambodia's residence in Phnom Penh.

According to the manager of the international telecommunications centre, 50-dollar-phone cards and 100-dollar phone cards are available. [passage indistinct]

**Communications Contracts Signed With France***BK2811101391 Hanoi Voice of Vietnam Network  
in Vietnamese 2300 GMT 25 Nov 91*

[Text] A signing ceremony was held on the afternoon of 25 November at the Government Guest House for two contracts between the Vietnamese Posts and Communication Corporation and (Asapusit) Company.

Comrade Dang Van Thanh, general director of the Vietnamese Posts and Communication Corporation, and Mr. (Pierre Guichet), manager of the (Asapusit) Company signed the contracts.

Witnessing the signing on the French side were Roland Dumas, minister of state for foreign affairs, French Ambassador Blanchemaison, and many representatives of major French companies. On the Vietnamese side were Nguyen Manh Cam, minister of foreign affairs, and representatives of the Office of the Council of Ministers; the Ministry of Communications, Transportation, Post, and Telegraph; and related offices.

The contracts regulate the assembling and installation of E10B Electronic Telephone Switchboards in Vietnam. The contract for installation of switchboards in Da Nang, Hue, and Vung Tau will be implemented first. The other contract is for installation of an MB Electronic Telephone Switchboard in Hanoi.

**ROK Chooses U.S. Firm for Communications Satellite***SK0212041791 Seoul YONHAP in English 0145 GMT  
2 Dec 91*

[Text] Seoul, Dec. 2 (YONHAP)—U.S. General Electric (GE) Astrospace has won the 260 million-U.S.-dollar "Koreasat" project contract for Korea's first communications and broadcasting satellite, to be launched in April 1995.

Korea Telecom had scrutinized the bids of GE Astrospace and its main competitor, British Aerospace (BAE), and opted for GE and a contract will be signed by Dec. 20, government sources said.

GE teamed up with Goldstar and offered a bid of 144 million dollars for two satellites and two controlling stations, and BAE, which teamed with Daewoo, put in a bid of 152 million dollars, the sources said.

Korea Telecom closed the bidding in July. In addition to GE and BAE, Hughes Aircraft Co. and Space Systems Loral had applied for the project, which is often dubbed "Mugunghwa Satellite" after the national flower.

## REGIONAL AFFAIRS

### South Africa's M-Net Granted 6-Month Broadcasting License

MB1812142491 Johannesburg SAPA in English  
1221 GMT 18 Dec 91

[Text] Windhoek Dec 18 SAPA—The temporary broadcasting licence granted to M-Net in Namibia will be valid for six months, according to Mr Hidipo Hamutenya, minister of information and broadcasting in Namibia.

In a statement on Wednesday, Mr Hamutenya said in terms of the new Broadcast Act, a further application for a permanent licence would have to be made by M-Net during the first quarter of 1992.

M-Net will begin test transmissions in Windhoek this week.

The broadcaster has cautioned, however, that the current transmission will not cover the entire Windhoek area.

The M-Net signal coverage will increase early in 1992, when the transmission antenna is upgraded.

The station offers its viewers a combined service of both open and pay television.

M-Net is southern Africa's only pay-TV service, with more than 630,000 subscribers in South Africa and Lesotho.

### Paper Reports South Africa To Buy Shares in KTN

EA1712143591 Nairobi THE STANDARD in English 16 Dec 91 p 5

[Article by Xavier Lugaga: "South Africa To Buy a Stake in KTN"]

[Text] The chairman of the KENYA TIMES Media Trust (KTMT), Mr. Jared Kangwana, is today expected to announce the purchase of shares in the Kenya Television Network (KTN) by Amnet, a South African broadcasting company. The KTN, a subsidiary of KTMT, was partly owned by British media mogul Robert Maxwell who died in mysterious circumstances last month.

A source at KTN told THE STANDARD that Amnet had acquired "significant" shares in the network. The source, who spoke on condition he was not to be named, declined to give further details.

### South Africa Acquires Shares of Kenyan TV Network

AB1612125091 Paris AFP in English 0838 GMT  
16 Dec 91

[Text] Nairobi, Dec 16 (AFP) - A South African broadcasting company, AMNET, has acquired substantial shares in the Kenya Television Network (KTN), THE STANDARD newspaper reported here on Monday [16 December].

The KTN, a subsidiary of the Kenya Times Media Trust (KTMT) which also owns KENYA TIMES newspapers, is jointly owned by the ruling Kenya African National Union

(KANU) Party and British Media magnet Robert Maxwell, who died mysteriously last month.

Standard quoted a KTN source, who requested anonymity, as saying that AMNET had already acquired a "significant" stake in the KTN, but refused to give further details.

The development could be the beginning for South Africa of extensive business involvement in Kenya which restored ties with Pretoria this year after a rupture of several decades.

### KTN Chairman Announces Partnership Accord With M-Net

EA1812152091 Nairobi KTN Television in English  
1600 GMT 17 Dec 91

[Text] Jared Kangwana, today announced a partnership agreement between KTN and Media Network Limited, M-Net, of South Africa. He said the exercise to seal the partnership is currently being worked out and will involve M-Net becoming a shareholder on a 50-50 percent basis. Kangwana said the measure being taken by KTN and M-Net is a first concrete business step being taken on the future of KTN.

[Begin Kangwana recording] M-Net is a highly successful pay television network with over 630,000 subscribers in southern Africa. M-Net is recognized worldwide as a leading player in pay television and is currently the third largest service outside the U.S. It has particular strength in technical broadcasting fields and subscription management skills which it will bring to KTN.

KTN is currently, on its part, undertaking a market research to establish whether the demand exists for another channel. In the meantime, however, KTN will adopt a new format from 1992. The station will offer a combined service of both open and pay television consisting of four hours of open broadcasting every evening, and the balance being pay TV in encoded format. The four-hour open window will comprise KTN's well-established formula of quality entertainment and news. During the encoded time, a scrambled signal will be broadcast using proven secure encryption technology.

Subscribers to the service will require a decoder to unscramble the signal to obtain a clear picture and sound. KTN's relationship with M-Net heralds an exciting new era of entertainment and information TV in Kenya. Through this joint venture, advertisers in Kenya will for the first time have an opportunity to advertise their goods and services in South Africa while South Africa advertisers will similarly be able to promote their goods and services here in Kenya. [end recording]

[Begin South African representative Koos Bekker recording] KTN's program is already very good, but so far it doesn't have the skill to set up a subscribing management, which is really quite complex, and that's the side we'll provide, because programming is less [words indistinct] - let's say that our skills there are less important. But

we'll provide testings, we will provide the technical expertise to set up the hard encryption system and the management of that, plus the subscriber-management side, financial and technical skills, and secondly, we'll provide funding. But I think partnerships are very important.

M-Net has 14,000 different shareholders—and included is a wide variety of interests - and you need that because TV tends to be owned not by one person but by a great many interests simultaneously, each bringing to it a certain skill. [end recording]

## ANGOLA

### Dos Santos Notes Importance of Expanded TV Service

*MB1412194691 Luanda Radio Nacional Network in Portuguese 1900 GMT 14 Dec 91*

["Message to the Nation" by President Jose Eduardo dos Santos on the occasion of the first People's Television of Angola transmission to several provinces; in Luanda on 14 December—recorded]

[Excerpt] The People's Television of Angola, TPA, has been broadcasting directly to five [number as heard] provinces for just over 30 minutes. The signal is being beamed via satellite to the provinces of Cabinda, Cuanza Norte, Malange, Bie, Huambo, Benguela, and Huila.

Angolan President Jose Eduardo dos Santos addressed a message to the nation on the occasion of this first television transmission. He noted the importance of expanding the beam, adding that it would allow the elimination of distortions of the reality in certain parts of the country.

[Dos Santos] This is a technological advance [words indistinct] with which the government places such an important information, education, and entertainment vehicle for the use of the majority of Angolan people. At a time when attempts to extend state authority to every corner of Angolan territory are meeting with unacceptable obstacles from the National Union for the Total Independence of Angola, UNITA, expanding the television signal to the aforementioned provinces will certainly help convey true information and offset the negative effects of some propaganda and of certain distortions of the reality. This is still happening in many parts of the country.

Through the medium of the television, the great Angolan family will now be able to reveal and recognize its identity, peculiarities, and differences better than before. The great Angolan family will become even more aware of the feeling of belonging to the unique and indivisible whole embodied by the Angolan nation.

The legitimate pride we are feeling now is made even keener by the fact that Angolan technicians themselves are guaranteeing this progressive expansion of the television signal to the whole country. Many of those technicians underwent their training after our independence. Thus, we would like to congratulate the TPA and its workers on their achievement. [passage omitted]

## MAURITIUS

### Network Joins International Direct Dialing

*92WT0058A Port Louis LE MAURICIEN in French 8 Nov 91 p 4*

[Article signed J.A.: "Telephone: All Subscribers Can Now Dial Foreign Numbers Directly"—first paragraph is LE MAURICIEN introduction]

[Text] All networks will shift to seven-digit dialing at 2300, this Friday. Any telephone subscriber can now call or be called from abroad directly from his office or home. That is because the entire national work is now connected to the IDD (International Direct Dialing) system, as a result of the generalized shift from five-digit to seven-digit dialing today at 2300.

The Mauritius Telecommunications Services [MTS] were host to the press yesterday, to announce the completion of this stage of their current development program. One of its major characteristics is the use of electronic systems in all exchanges, to which local structures (the satellites) are connected.

As a result, the 800 household and business subscribers in the following communities will now use the new dialing system: Abercrombie, Montagne Longue, Pamplemousses, Souillac, L'Escalier, Nouvelle France, and Midlands.

The creation of new exchanges, for instance at Forest-Side and Candos, has made it possible both to provide electronic service to the seven above-mentioned communities and to have an additional 29,000 lines available.

The MTS, which announced the publication of the directory (telephone, telex, fax machine) for December, with data updated as of June 1991, have published a supplement to ease the transition to seven-digit dialing for the users concerned. This will be mentioned in the directory.

The corresponding MTS department warned that some problems might be encountered in dialing, or being called from, a seven-digit number in the new communities. They estimate that everything should work fine by Monday. Until then, if you have a problem, please dial 90.

While the operation of additional exchanges results in the advantages listed, it marks a progress in meeting the demand for telephone subscription as much as it slows it down.

According to MTS officials, 1,200 to 1,500 applications are filed every month. To meet the demand, the waiting list must first be exhausted; however, as can be seen, it keeps getting longer. With the addition of the latest exchanges, the current number of lines installed is 102,000; the objective of the MTS, as it completes other stages of development, is to reach 200,000 lines by 1994.

The independent state-owned organization acknowledged that many communities require special efforts, and it was said that these will be made. This is the case for the connection to the network of places such as Ville d'Avray, Roches Noires, and La Gaulette. While no schedule was published as to when these villages will be served, it was

announced that Albion will soon get an exchange with a capacity of about 1,000 lines.

To equip these new exchanges, the MTS uses equipment supplied by NEC of Japan, rather than from the French Alcatel. An MTS official stated that there was not much difference between the two technologies.

Hosts to the press, next to Mr K. Katiyar, general manager, were Messrs P. Colimalay, S. Adam, P. Li Kam Tin, D. Dosieah, P. Naiken, and V. Appanah.

## NIGERIA

### Communications Ministry To Move to Abuja Soon

AB1712174491 Lagos Radio Nigeria Network  
in English 0600 GMT 16 Dec 91

[Text] The headquarters of the Ministry of Communications is to start operations soon in Abuja. The Minister of Communications, Chief Olawele Ige, stated this in an interview with Joseph Azohunu who now reports:

[Begin Azohunu recording] Arrangements have reached an advanced stage to transfer members of staff of the ministry from Lagos to Abuja. Already, the minister has assumed duty in the new federal capital. Chief Ige announced that 20,000 telephone lines have been made available in the Abuja Exchange. Out of the number, only 4,000 lines have been allocated. The minister described the telephone facilities installed in the Abuja Exchange as the first of this kind in the country. He said that the telephone lines in Abuja would boost productivity within and outside the capital city. Chief Ige gave an assurance that the digital communications system in the new federal capital would be adequately linked, both locally and internationally. Already some foreign missions accredited to Nigeria are in Abuja.

## SOUTH AFRICA

### International Telecommunications Cable Work Begins May 1992

MB2112062091 Johannesburg BUSINESS DAY  
in English 20 Dec 91 p 3

[Report by Gerald Reilly: "Underwater Link To Cost R800 million"]

[Text] Pretoria—The laying of a 9,500km long optical fibre submarine telecommunications cable which will link SA [South Africa] with Europe and the U.S. will start in May next year, a Telkom international telecommunications spokesman said yesterday.

The cable will replace the existing SAT 1 cable which has reached the end of its 20-year life.

Work on the 800 million rand [R] project is expected to be completed by May 1993 by STC submarine systems of the UK and Alcatel Submarcom of France.

The construction and maintenance agreement was signed earlier this year.

Fifteen telecommunications enterprises from 14 countries—including the UK, Germany, France and Canada—will be co-owners of the system, with SA contributing the lion's share—69 percent of the total.

The spokesman said international communications traffic was growing at more than 14 percent a year.

According to conservative estimates, SA's income should adequately cover the redemption of the loan as well as interest payments. Telkom obtained 100 percent foreign financing for the project.

The system, which has a capacity of 7,680 channels, will stretch from Melkbosstrand near Cape Town to the Canary Islands and Madeira.

The spokesman said the system should satisfy the demand for telecommunications links between SA and overseas telecommunications enterprises up to the year 2020.

For most of its length the cable will lie at a depth of more than 4,000, reaching a maximum depth of 5,800 metres near St Helena.

It will form part of an international network.

**Government To Build Fiber-Optic Telecommunications Base***OW0112173191 Beijing XINHUA in English  
1424 GMT 1 Dec 91*

[Text] Wuhan, December 1 (XINHUA)—A ceremony celebrating construction of a science and technology industrial zone involved in fibre optic telecommunications technologies and micro-electronic technologies was held here today.

The zone is going to be built into the largest and most important fibre optic telecommunications base in China.

The Guangdong Science and Technology Industrial Zone in east suburban Wuhan, capital city of central China's Hubei Province, covers a designed area of 180 ha and costs more than 350 million yuan. The first phase project of the zone is expected to be finished by 1995.

The zone, the first in the city, has abundant science and technology industries, as well as fine water supply, electricity supply, and telecommunications and communications facilities. The Changfei Fibre Optic Company, the largest in the country, has already been set up in the zone.

In the future, the zone will mainly focus on the development of photo-electric terminals, photo-electric equipment, fibre optic connectors, fibre optic testing meters and infrared optical fibre.

**Fiber-Optic Revolution for Telecom in China***40100007 Beijing CHINA DAILY in English 21 Nov 91 p 1*

[Article by Xie Liangjun]

[Text] China is to co-operate with Japan and the United States to speed up construction of its first international submarine cable line in a bid to switch the domestic telecommunications network on to the global system.

Planners with the Ministry of Posts and Telecommunications revealed that the three countries are currently installing a 1,300-kilometre submarine cable between Shanghai and Kyushu in Japan.

The \$64.3 million project, which will link China's telecommunications cable network with the world, is due to be completed in 1993 when Chinese subscribers will have easier access to their overseas counterparts. The government also plans to complete five major fibre optic cables during the 1991-95 period in an attempt to facilitate long-distance telephone communications. The trunk lines would cost about 2 billion yuan (\$373 million) and link Beijing with China's other major cities.

The 4,200-kilometre Beijing-Shenyang-Harbin line will start construction next year with an investment of up to 600 million yuan (\$112 million), of which about \$50 million in loans is expected from Japan.

Ministry officials said the 2,600-kilometre Southern Coastal Trunk Line was already under construction at a cost of 400 million yuan (\$74.6 million). It will connect

Shanghai, Hangzhou, Ningbo, Wenzhou, Fuzhou and Xiamen with Guangzhou and is expected to be completed by the end of 1992.

The Beijing-Tianjin-Jinan-Hefei-Shanghai fibre optic cable, which will cost 300 million yuan (\$56 million), is scheduled to begin construction next year for completion in the first half of 1993. The project will link six provincial capitals.

The Beijing-Hankou-Guangzhou line is expected to be completed in 1995 at a cost of 600 million yuan (\$112 million). The government hopes to attract overseas investment to ease the financial burden of this undertaking.

The State Planning Commission has approved installation of a Zhengzhou-Xi'an-Chengdu fibre optic cable during the Eighth Five-Year Plan period (1991-95). The government hopes to attract foreign government loans to partially cover the project.

The construction of fibre optic trunk lines and the installation of computerized telephone exchanges is on the top of the government's development agenda.

China started building such cables in the late 1970s. There are now 11,000 kilometres of domestic fibre optic lines. During the 1986-90 period, only one such trunk line, the Wuhan-Nanjing Line, was built.

Apart from major cables funded by the central government, provinces and autonomous regions have been encouraged to install inter- or intra-provincial fibre optic lines to ease logjams on existing local networks or to expand telecom capacity.

**Further Reports on Fiber-Optic Communications****Nanjing-Tianjin Cable Construction Begun***92P60054A Shanghai DIANXIN KUAIBAO  
[TELECOMMUNICATIONS INFORMATION]  
in Chinese No 9, Sep 91 p 26*

[Article by Li Xiangbin [2621 4161 1755]: "Construction Begun on Nanjing-Tianjin Fiber-Optic Cable Trunkline"]

[Summary] Construction has begun on the 1,050-km-long Nanjing-Tianjin fiber-optic cable trunkline. This line, which will cross Jiangsu, Shandong, and Hebei Provinces, will employ 24-fiber cable and will open up 8,000 circuits when first-phase construction is completed in summer 1992. The line will be linked with the Tianjin-Beijing and Nanjing-Shanghai trunklines to form a 1,580-km Beijing-Shanghai trunkline.

**Shanghai AT&T's Production Line Operational***92P60054B Beijing ZHONGGUO DIANZI BAO [CHINA  
ELECTRONICS NEWS] in Chinese 18 Sep 91 p 1*

[Article by Xue Wen [5641 7186]: "Fiber-Optic Transmission Equipment Production Line Completed in Shanghai"]

[Summary] Construction on a state-of-the-art production line for making fiber-optic transmission equipment and



PCM [pulse code modulation] digital multiplexing equipment was formally completed at Shanghai AT&T Communications Equipment Ltd. on 5 September and the line is now operational. Via advanced equipment imported from the United States and the Netherlands, Shanghai AT&T will be able to manufacture 16 different products, including 4,000 optoelectronic terminals per year, 1,000 for sale on the world market. Since March 1990, when the firm opened for business, it has won several contracts for providing high-capacity digital fiber-optic transmission equipment: the US\$30 million worth of contracts include a \$2 million contract for transmission equipment for the Shanghai-Nanjing MPT priority fiber-optic cable trunkline and \$19 million for three Beijing metropolitan network projects.

#### **Fushun Petrochemical's First Integrated Network**

92P60054C Beijing JISUANJI SHIJIE [CHINA COMPUTERWORLD] in Chinese No 36, 18 Sep 91 p 5

[Unattributed article: "Fushun Petrochemical Co. Completes Integrated Fiber-Optic Communications Network"]

[Summary] The domestic petrochemical industry has just gotten its first integrated fiber-optic network: the Fushun Petrochemical Corp.'s network, which can handle telephone, computer communications, TV program transmission, and other services, has been completed. The network will link the VAX-6410 computer in the corporation's computing center to its Petroleum Plant No. 1, its ethylene plant, and its acrylic fiber plant, all within a 5-km radius (maximum transmission range) of the computing center. BER is better than the  $10^{-9}$  standard. The network employs the BFMDL-1 time-division-multiplexing (TDM) fiber-optic terminals made by the Beijing Optical Communications Co.; these terminals provide a 64 kbps synchronous channel, a 9.6 kbps synchronous channel, and a 19.2 kbps asynchronous data channel.

#### **Shanghai To Build FTTH CATV Network**

92P60054D Beijing JISUANJI SHIJIE [CHINA COMPUTERWORLD] in Chinese No 37, 25 Sep 91 p 2

[Article by Xiao Qiang [2556 1730]: "Nation To Begin Construction on Fiber-Optic CATV in Shanghai Area's Jiading"]

[Summary] Fiber-optic technology is now moving into the home (FTTH, or fiber-to-the-home), with the upcoming construction in the Shanghai area's Jiading Xian ("Science City") of the nation's first fiber-optic cable TV demonstration project. The overall plan, which recently formally passed expert appraisal, is divided into near-term, mid-term, and long-term segments. In the near-term (1992) and mid-term (1993) segments, 18,000 and 24,000 homes, respectively, will be wired; 88,000 homes should be wired by 1996. Fifteen TV programs (eventually expandable to 28) will be carried in the CATV network, with the Jiading Xian People's Broadcasting Station as the transmission center; a unidirectional 300 MHz transmission system will be used.

#### **Nation's First Shallow-Sea Cable Completed**

92P60054E Beijing ZHONGGUO DIANZI BAO [CHINA ELECTRONICS NEWS] in Chinese 29 Sep 91 p 1

[Article by Li Qiongrui [2621 8825 3843] and Wang Shunli [3769 7311 0448]: "Nation's First Shallow-Sea Fiber-Optic Cable Completed"]

[Summary] Construction on the nation's first shallow-sea fiber-optic cable project, on which research and trial manufacturing was undertaken by MMEI's Institute 8, has now been formally completed, with the expert accreditation of the cable in Beijing on 17 September. The new cable has an unrepeated transmission range of several tens of kilometers; optical loss does not exceed 0.5 dB/km. The "steel-like" cable is designed to resist 15 tons of pulling force.

#### **III-V-Group 2-5-Micron IR Receiver Developed**

92P60054F Beijing ZHONGGUO DIANZI BAO [CHINA ELECTRONICS NEWS] in Chinese 6 Oct 91 p 3

[Article by Hu Wen [3337 2429]: "Infrared Optical Communications Receiver Developed"]

[Summary] An NSFC-funded project entitled "III-V-Group 2-5  $\mu$ m Infrared Fiber-Optic Communications Receiver" has been completed by the CAS Shanghai Institute of Metallurgy. The newly developed InAsSb/InAs high-speed detector, the first such device developed domestically, has a response peak wavelength and ultra-long-wave fiber-optic window matching that fully meet requirements for ultra-long-wave fiber-optic communications.

#### **First 60-km Unrepeated Bundle-Tube Overhead Cable**

92P60054G Beijing KEJI RIBAO [SCIENCE AND TECHNOLOGY DAILY] in Chinese 12 Oct 91 p 1

[Article by Zhang Yangcan [1728 7122 3503] and Yang Dezheng [2799 1795 2398]: "Nation's First 60-km Unrepeated Bundle-Tube-Type Overhead Fiber-Optic Cable Operational"]

[Summary] The nation's first 60-kilometer-unrepeated bundle-tube-type fiber-optic cable (Shuijiahu to Bengbu segment) became formally operational on 9 October. This four-fiber DS-3 [34 Mbps] digital transmission system, 60.5 km in length, was designed by the Ministry of Railways No. 4 Survey and Design Institute; all of the fiber-optic cable and optoelectronic terminals are domestically made. This cable links Bengbu, Shangqiu, Fuyang, Huainan, Bozhou [i.e., Bo Xian], and Zhengzhou into a communications network.

#### **Zhengzhou-Wuchang Railway Communications Line Operational**

92P60079A Beijing KEJI RIBAO [SCIENCE AND TECHNOLOGY DAILY] in Chinese 6 Nov 91 p 1

[Article by Zhou Honggui [0719 1347 6311]: "Zhengzhou-Wuchang Fiber-Optic Communications Line Operational"]

[Summary] The national railway system's longest fiber-optic communications line—the Zhengzhou-Wuchang long-distance automated communications line—was formally opened on 5 November. This 572-km-long line, a segment of an advanced Beijing-Guangzhou line currently under construction, has a capacity of 1,920 telephone circuits, and represents a 500-percent increase over the previous number of lines between the two cities.

**Nanjing-Shanghai-Fuzhou-Guangzhou Line Begun**  
92P60079B Beijing JISUANJI SHIJIE [CHINA  
COMPUTERWORLD] in Chinese No 43, 6 Nov 91 p 1

[Article by Li Xiangbin [2621 4161 1755]: "Construction Begun on Fiber-Optic Cable Trunkline To Connect Nanjing, Shanghai, Fuzhou, and Guangzhou; Ground-Breaking in Zhejiang Area Is First"]

[Summary] Construction of a 2,900-km-long Nanjing-Shanghai-Fuzhou-Guangzhou fiber-optic cable line, the first Eighth 5-Year Plan trunkline fiber-optic cable project and the longest such project to be built in China, has begun, with first ground-breaking taking place in the Zhejiang area. The overall project has been funded with a gross investment of 417.08 million yuan. After its completion, the new line will be joined with the Nanjing-Wuhan fiber-optic cable trunkline to form a major digital fiber-optic network covering the nation's southeast and southern seacoast areas. It can also be joined to the now-being-upgraded Beijing-Guangzhou fiber-optic cable which, together with the Nanjing-Wuhan line, would form a network covering the east, south, southwest, and north.

**Official Reveals Future Rocket Launch Plans**  
HK2911024691 Hong Kong ZHONGGUO TONGXUN  
SHE in Chinese 1303 GMT 26 Nov 91

[By reporter Zhuo Jianan (0587 1696 1344)]

[Text] Hong Kong, 26 Nov (ZHONGGUO TONGXUN SHE)—Jiao Yong [3542 0516], China Astronautics Association council member, said today that during the Eighth Five-Year Plan, China will deploy a Dongfanghong [The East Is Red] III [Roman three] telecommunications satellite, a Fengyun [7364 0061 Clouds] II [Roman two] meteorological satellite, and, in cooperation with Brazil, a global resources satellite. Next year, China will deploy two telecommunications satellites for Australia and one for Sweden.

Jiao Yong made the above disclosure at today's eighth meeting of the preparatory committee for the "China Space Technology Exhibition" to be held in Hong Kong. He also disclosed that the Dongfanghong III is one of China's second generation of telecommunications satellites, used mainly for domestic telecommunications, including services covering television, broadcasting, facsimile, and telegrams. This satellite will be deployed using a Long March III [Roman three] rocket at the end of 1993 or the beginning of 1994. As a geostationary satellite, the Clouds II meteorological satellite is also expected to be deployed using a Long March III rocket in 1993.

Jiao Yong indicated that, up to now, the international satellite-deploying market has been monopolized by European and American countries. France and the United States account for almost 60% and 40% respectively of the market, while China only makes up a very small proportion. This has mainly resulted from the restrictions on obtaining satellite permits, because almost all the satellites concerned are made in European and American countries and these countries undoubtedly hope that they will deploy the satellites themselves. For example, the satellite-launching contract between China and the Arab Satellite Organization signed at the beginning of this year had to be canceled because of problems over obtaining satellite permits. However, China ranks among the world's advanced countries in rocket-launching technology and is by no means inferior in comparison to advanced European and American countries. China is hopeful of opening up new satellite-deploying markets. At present, Chinese is very interested in the Asiasat II [Roman two] developed by the Asia Satellite Company, a joint-stock company involving China International Trust and Investment Corporation, Hutchison Whampoa, and Britain's Cable and Wireless. China hopes to launch satellites for this company again.

**Minister Lauds Guangdong Telecommunications**  
HK0412013591 Hong Kong TA KUNG PAO in Chinese  
22 Nov 91 p 2

["Newsletter" by staff reporter Yuan Hsiu-Hsien (5913 4423 6343): "Guangdong's Telecommunications Sector Prepares Blueprint"]

[Excerpt] Guangzhou, 21 Nov (TA KUNG PAO)—"In the development and building of post and telecommunications in recent years, Guangdong Province has enjoyed the fastest growth, achieved the best results, and experienced the greatest changes in its telecommunications sector, thereby catapulting the province's post and telecommunications network to the top in the country." This assessment was made by Yang Taifang, the minister of post and telecommunications, at the "Guangdong Provincial Telecommunications Conference," held this morning. Over the past five years, Guangdong has: Raised money through various channels; made good use of foreign capital; expanded capital input; imported advanced facilities in a measured way; relied on science and technology; engaged in level-by-level construction; stepped up the development of the telecommunications industry; improved the investments climate; and has promoted the rapid growth of the economy.

**Outstanding Development Rate**

CPPCC Vice Chairman Ye Xuanping said: "Good telecommunications are an indispensable condition for economic development. If the economy is to take off, post and telecommunications should be developed first." Over the past years, Guangdong Province has boldly embarked on the path of "borrowing money to buy chickens and repaying with money earned from selling eggs" and sought

investments from the state, funds from the locality and society, and loans from the banks. At the same time, it has made good use of foreign capital to speed up the development of the telecommunications industry. During the "Seventh Five-Year Plan," the province poured a total of 4.04 billion yuan into building the post and telecommunications industry; this was 6.7 times more than the total investments during the "Sixth Five-Year Plan." In particular, foreign capital and foreign loans made up 37 percent of the investments and helped expand capital input which, in turn, accelerated telecommunications industry growth remarkably. Over the past five years, the province's fixed assets in post and telecommunications rose by 4.7 times from 700 million yuan to 4 billion yuan; the total number of telephones in urban and rural places grew by 3.7 times from 403,000 to 1.807 million sets; long distance lines increased by 4.5 times from 3,900 to 21,500; eight mail sorting centers were built and the mail working area was expanded by 150,000 square meters; postal delivery capacity was upgraded fairly significantly; and the total volume of postal business experienced an average annual growth rate of 37.2 percent. The development of the post and telecommunications industry has improved the investment climate and promoted economic growth. In the past five years, the province's GNP has grown at an average annual rate of 12.3 percent while total output value for industry and agriculture increased at an average annual rate of 20.1 percent.

#### Great Results From Technological Progress

In building telecommunications, Guangdong Province, guided by science and technology, imported advanced facilities from abroad having properly defined its priorities and in a measured manner. It was thus able to start from a high plane. It was then able to achieve fairly big strides in the renovation of technologies related to the telecommunications network and narrow the gap with advanced countries and regions. In recent years, by making good use of loans and attracting foreign capital, Guangdong was able to import advanced facilities from Japan, Sweden, Canada, and other countries, raising the scientific and technological input into its telecommunications network. In 1989, automated telephones were introduced to counties and cities in the province. By the end of 1990, stored program controlled telephones made up 77.4 percent of the total telephone capacity of the cities, while automatic telephones made up 78 percent of the total telephone capacity in rural areas. The integration of urban-rural stored program controlled telephones was introduced to the towns and counties of Dongguan, Shunde, Nanhai, Baoan, and Huiyang, and Guangzhou became the country's first provincial capital to have stored program controlled telephones. Long distance dialing cables now make up 46 percent of the total amount of cabling. The Zhujiang Delta already has stored program controlled exchanges and digital transmissions. A major long distance transmission network composed principally of optical fiber cable, microwave, coaxial cable, and satellite telecommunications now spans all cities at locality level as well as some economically-developed counties in the province. The Guangzhou International Telephone Exchange Bureau was

built with 90 percent of long distance communications transmitted via the automatic network. Telegrams now are automatically connected and transmitted between provinces and between cities and counties within the province. A network of mobile telephones and BB [published in Roman script, expansion unknown] sets have been introduced in the Zhujiang Delta. Meanwhile, the postal service is gradually making the transition from its traditional manual operations to mechanization and automation. Postal codes have been introduced all over the province. Mail delivery and transport are now carried out by counties themselves while calculator technology is applied in postal production and management. [passage omitted]

#### South China To Build Telecommunications Lines

HK0312071491 Hong Kong TA KUNG PAO in Chinese  
22 Nov 91 p 1

["Special dispatch" from Guangzhou by Yuan Hsiu-hsien (5913 4423 6343): "Yang Taifang, Postal and Telecommunications Minister, Reveals That Guangdong Is To Erect Five Major Telecommunications Lines"]

[Text] Guangzhou, 21 Nov (TA KUNG PAO)—Yang Taifang, China's minister of postal and telecommunications, said today here: In the next five years, several major telecommunications lines will be built and tied to Guangdong, to ease pressure on telecommunications links between it and other provinces, and to increase international telecommunications links markedly in the province.

A Guangdong provincial telecommunications work meeting began this morning at the Guangdong Provincial People's Government Hall; it will discuss policy and measures concerning further expediting the construction of telecommunications in Guangdong.

Yang Taifang made a speech at the meeting. He praised Guangdong as a province with the most rapid and efficient development of postal and telecommunications services in China.

According to information, the several major telecommunications projects to be built in Guangdong are:

- Southern coastal optical fiber cable, that is, a 24-core Shanghai-Hangzhou-Fuzhou-Guangzhou optical fiber cable will be laid; it is expected that by the end of next year some parts of the project may begin operation, and by the first half of 1993, the whole project will be completed, and by then, a number of telephones will be provided to the places along the line in Guangdong.
- A 30-core Beijing-Wuhan-Guangzhou optical fiber cable will be laid. According to plan, the project will be completed in 1994; some overhead optical fiber cables will first be built phase by phase, and it is expected that operation can begin by 1993.
- Through expanding the capacity of the Shanghai-Nanjing-Jiujiang-Nanchang optical fiber cable and of the Nanchang-Ganzhou-Shaoguan-Guangzhou digital microwave, enable Guangzhou-Shanghai telecommunications links to increase. It is expected that work will be completed by next year.

—The Guangzhou-Zhangjiang-Haikou and the Guangzhou-Wuzhou-Nanning optical fiber cables can link Guangzhou to the west and south. Work must be completed in two years.

—Expansion of the capacity of the Wuhan-Guangzhou microwave will add 1,500 lines linking Guangzhou with various places in the whole country. Work will be completed by the end of this year.

—The new Guangzhou international satellite communications earth station; it is expected that work will be completed during the Eighth Five-Year Plan.

Thus, in the future, Guangdong's telecommunications links with other provinces and its international telecommunications links will use optical fiber cable, microwaves, and satellites as the main transmission means. To the east, there is the southern coastal optical fiber cable; to the north, there is the Beijing-Wuhan-Guangzhou optical fiber cable; to the southwest, there are the Guangzhou-Hainan and Guangzhou-Guangxi optical fiber cables, plus the international satellite earth station, thus difficulties in telecommunications links between Guangdong and other places will be reduced.

#### **Urban Residents Increasingly Installing Private Telephones**

*OW0812025191 Beijing XINHUA in English 0117 GMT 8 Dec 91*

[Text] Nanjing, December 8 (XINHUA)—Installing a private telephone has become a new consumer trend for Chinese urban residents.

In Nanjing, capital city of east China's Jiangsu Province, 13,000 families have applied for telephones. The city telecommunications bureau has decided to increase the installing of residential telephones from the originally planned 15,000 lines to 20,000 lines next year to meet the quickly rising demand.

This telephone fever started in 1987. According to statistics from Jiangsu Province, 5 percent of its urban residents had telephones in 1987, compared with 33.6 percent in 1990.

Residential telephones are being installed fastest in Shanghai, the biggest city in China. At present more than 120,000 families are waiting for installation, and 400 to 500 more are added to the list each day.

In Shenzhen City of Guangdong Province, 86 percent of the urban families have telephones, the highest percentage of all mainland cities.

Related personnel offered that the fever for residential telephones marks the improvement of urban residents' living standards, and reflects their attention to information.

#### **Beijing TDM/CDMA Satcom Network Certified**

*92P60055A Beijing KEJI RIBAO [SCIENCE AND TECHNOLOGY DAILY] in Chinese 28 Sep 91 p 1*

[Article by Gu Xiaoxiang [7357 1321 5980]: "Beijing Realizes New Achievement in Satellite Communications Networking"]

[Summary] The TDM/CDMA [time-division multiplexing/code-division multiple access] satellite communications network developed by Beijing University's Radio and Electronics Department recently passed technical appraisal. This satcom network consists of one central earth station and 500-1,000 VSAT [very-small-aperture satellite terminal] user earth stations. The network, which permits telephone and data communications from mountainous and remote desert areas, meets late-eighties international standards.

#### **Space Technology Exhibition To Open in Hong Kong 28 Nov**

*HK2911024591 Beijing ZHONGGUO XINWEN SHE in Chinese 1327 GMT 25 Nov 91*

[By reporter Ke Yan (0668 0917)]

[Excerpt] Hong Kong, 25 Nov (ZHONGGUO XINWEN SHE)—A ribbon-cutting ceremony for a large China Space Technology Exhibition will be held in Hong Kong on 28 November. The public will be allowed to visit the exhibition free of charge on 29 November. In an interview with this reporter, Dr Cao Hongwei, deputy director and secretary general of the exhibition preparatory committee and senior lecturer in the Chinese University of Hong Kong Biochemistry Faculty, said that after reading a great deal of material while preparing for the exhibition, he felt proud China's achievements in space technology and was deeply moved by the pioneering spirit manifested in the course of China's space development. [passage omitted]

#### **Henan Further Develops Wire-Broadcasting Networks**

*HK3011065991 Zhengzhou Henan People's Radio Network in Mandarin 2300 GMT 27 Nov 91*

[Text] The First Henan Provincial Conference on Exchanging Program Designing Experiences of Township and Town Broadcasting Stations was held in Xuchang City 25-27 November.

Director Ma Xianhao and Deputy Director Ma Fukui of the Henan Provincial Radio and Television Department attended the conference.

Over the past few years, wire-broadcasting networks have sprung up rapidly in our province. By the end of last year, wire-broadcasting networks had been established in 32 counties and 966 townships of the province with their number of loudspeakers totalling more than 10.72 million, accounting for one eighth of the total number of wire-broadcasting loudspeakers throughout the whole country. In addition, more than 740 townships and towns had also started broadcasting their self-designed programs.

Practice over the past many years has attested that wire-broadcasting networks have already become the most direct, flexible, and efficient propaganda instrument used by party committees and governments at the grass-roots level and that programs designed and broadcast by township and town broadcasting stations themselves have struck root in the hearts of the broad masses.

The conference called on all city, prefectural, and county radio and television bureaus to provide more guidance to and strengthen management of various township and town broadcasting stations, adhere to the principle of conducting positive propaganda in the main, conscientiously observe the norms governing Chinese reporter's professional activities, design more programs of better quality on the premise of guaranteeing the relay of the programs transmitted by broadcasting stations at a higher level, and make endeavors to make programs more lively and interesting.

#### **Heilongjiang Quadruples Its Communication Capacity**

*SK2911084491 Harbin HEILONGJIANG RIBAO in Chinese 10 Oct 91 p 1*

[Summary] Heilongjiang Province has brought about greater improvement to its telecommunications equipment thanks to applying both domestic and foreign advanced technologies. As of now, the province has quadrupled its major telecommunications capabilities, including the capacity of urban telephone switch boards and long-distance telephone lines as compared with those of 1980. During the 10-year period, the province built three key long-distance telecommunications microwave systems and small coaxial cable lines with large capacity between Harbin City and the six cities of Mudanjiang, Jiamusi, and others; between Harbin City and Qiqihar

City; and between Harbin City and Yichun City. Harbin City also imported and installed the long-distance autonomous telephone switch board with the capacity of 1,500 lines. Thus, 34 cities and counties throughout the province, which account for 42 percent of the total, were fed into the country's long-distance, automatic, and direct-dial telephone network. There are 101 townships and towns throughout the province, which are under the province's rural telephone network.

#### **International-Standard C-Band Unified TT&C System Equipment Certified**

*92P60067A Beijing ZHONGGUO DIANZI BAO [CHINA ELECTRONICS NEWS] in Chinese 25 Oct 91 p 1*

[Article by Tang Jianwei [0781 1696 0251]: "Domestic Geosynchronous Satellite Telemetry, Tracking and Control Technology at Internationally Advanced Level"]

[Summary] Recently developed international C-band unified telemetry, tracking and control (TT&C) system equipment passed the appraisal held by NDSTIC and by the CHINATRON Corp. on 9 October in Chengdu, indicating that the nation's TT&C technology has reached an internationally advanced level. This domestically made equipment, developed by MMEI's Institutes 10, 39, and 54 and by the Ministry of Aerospace Industry's Institute 704, is China's third-generation large microwave unified TT&C system for the various orbital segments associated with the launch of a domestic geosynchronous satellite, and can as well provide TT&C cooperative services for foreign clients whose TT&C systems operate in the same frequency band. The technical specialists at the certification appraised the equipment's principal technical performance indicators as meeting late-eighties international standards. The entire development project was completed in just over two years, since the contract was signed in August 1989.

## REGIONAL AFFAIRS

**Philippines To Get Transponder Facilities on Palapa***BK1212081291 Jakarta ANTARA in English 0654 GMT  
12 Dec 91*

[Text] Manila, Dec. 12 (ANTARA/OANA-PNA)—The Indonesian state-owned telecommunications company, P.T. Telekomunikasi (Telkom), will provide the new transponder facilities to the new domestic satellite operator—Capitol Wireless, Inc. (Capwire), Philippine Satellite Communications Network (Philsat) for its one billion pesos.

Earlier, a memorandum of agreement was signed by Telkom's director, A. Purwo, and deputy director for marketing, Komarudin S., Capwire President Cesar Castro, and Capwire's vice president for international operations, Marilyn Santiago.

As indicated in the agreement, Telkom will also provide new transponder facilities to Republic Broadcasting System (RBS) which operates GMA [Greater Manila Area] television network.

Capwire reserved for one full transponder in Telkom's new generation Palapa B 4 while RBS for a half transponder.

With the acquisition of the new facilities, Philsat's master hub station will be definitely be operational by April or May 1992 together with some other key locations in the Philippines, including those which are required by the Philippine Department of Transportation and Communications [DOTC] municipal telephone project office.

The Philsat project, which was approved by the Philippine National Economic and Development Authority Governing Board chaired by Philippine President Corazon C. Aquino, is a joint venture of the DOTC and Capwire.

**Cellular Phone System Established With PRC Help***BK2911143291 Vientiane KPL in English 0925 GMT  
29 Nov 91*

[Text] Vientiane, Nov 29 (KPL)—The Asia-Pacific Electronic (Laos) Company Ltd, on November 28 opened to the public service cellular phone system, equipped with modern equipment brought in from the People's Republic of China.

The mobile phone system, installed here with the Chinese investment, is to serve the development of Lao-Chinese cooperation contributing to socioeconomic development in particular in communication system.

Attending the opening ceremony were Bouathong, minister of communication, transport, post and construction, and Mr. Huang Guocai, Chinese ambassador to Laos.

**Medals Awarded to Chinese TV Experts***BK2811134491 Vientiane KPL in English 0916 GMT  
28 May 91*

[Text] Vientiane, Nov 28 (KPL)—Minister of Information and Culture Mr. Mounkeo Olaboun, on behalf of the Lao Government yesterday presented here a friendship medal to a Chinese radio and television equipment company, and

three third class labor medals to three Chinese TV experts for their contribution in building a TV relay system to receive transmission from Chinese television.

Built with the Chinese Government's assistance, the TV reception system was recently handed over to the Lao Government.

## INDONESIA

**Private Sector Not Allowed To Launch Telecom Satellites***BK2911095291 Jakarta ANTARA in English 0710 GMT  
29 Nov 91*

[Text] Jakarta, Nov 29 (ANTARA-ECOANA)—The government has not yet allowed the private sector to launch telecommunications satellites as it is of a strategic matter, Tourism, Post and Telecommunications Minister Susilo Sudarman said here Thursday.

The government authorized only the state-owned telecommunication company to launch satellites, he disclosed, adding that as one way of uniting the nation in this archipelagic country, the Palapa domestic satellite communication system has been used for telecommunication and broadcasting purposes since 1976.

The minister also expressed hope that at one time Indonesia should have its own launching pad and be able to make satellites.

Meanwhile, telecommunication development director Suratno said in accordance with the prevailing regulations, any private company which intended to launch its own satellite should have a license from the government and cooperate with the state-owned telecommunication company.

## JAPAN

**Government To Assist Sea of Japan Communications Project***OW0712055691 Tokyo KYODO in English 0505 GMT  
7 Dec 91*

[Text] Niigata, Dec. 7 KYODO—Posts and Telecommunications Minister Hideo Watanabe said Saturday the ministry will assist a Niigata plan to build a communications network with the Soviet Union and other countries surrounding the Sea of Japan.

Watanabe, in a press conference in Niigata, pledged the ministry's financial and tax assistance to the project by the Niigata prefectural and municipal governments in line with the ministry's promotion policy of "teleport" projects for facilities for advanced satellite communications.

A teleport project is designed to build a ground station for satellite communications, a telecommunications center and a trade center in a city or port to help develop the area with advanced communications facilities.

The ministry authorized a teleport project in Osaka in 1988. Similar projects are being planned in six other cities including Tokyo, Yokohama, and Nagoya.

The ministry also sent a mission to the Soviet Union in October to study the country's broadcasting and communications situation as part of its plan to help improve communications facilities in the Soviet Union and Eastern Europe.

Thus, the minister's support for the Niigata project means part of the planned cooperation to the Soviet Union.

## SOUTH KOREA

### Dacom To Begin Overseas Telephone Service

SK0212052391 Seoul YONHAP in English 0453 GMT  
2 Dec 91

[Text] Seoul, Dec. 2 (YONHAP)—Dacom will offer a rival telephone service to the United States, Japan and Hong Kong from Tuesday [3 December] for 5 percent less than Korea Telecom.

The prefix to dial to place a call using the new service is 002, and Korea Telecom will continue to use 001.

Dacom says it will increase the number of countries that can be reached by its service to 52 in August 1992 and 65 in 1993.

Dacom will charge 1,240 won (1.64 U.S. dollars) for the first minute of a call to Japan or Hong Kong and 920 won for every additional minute. Korea Telecom charges 1,300 won for the first minute and 970 won for additional minutes.

Calls to the United States will cost 1,620 won for the first minute and then 1,210 won, compared to Korea Telecom's 1,700 won and 1,270 won.

A launching ceremony will be held at Dacom's main building in Seoul on Tuesday morning.

## SINGAPORE

### Technological Investment Fosters Information Advances

BK0312151691 Hong Kong AFP in English 0800 GMT  
3 Dec 91

[Text] Singapore, Dec 3 (AFP)—Singapore's technological investment makes it well placed to exploit the fusion of information technologies and telecommunications, a government minister said Tuesday.

Lim Boon Heng, senior minister of state for trade and industry, was speaking at the opening of the International Conference in Information Engineering here.

"Singapore's investment in computers and telecommunications has placed us in a very advantageous position to exploit these technological and industrial trends in the area of information technology (IT)," Lim said.

He said harnessing the power of IT would help creativity and create pervasive linkages of individuals, firms and communities around the globe.

Lim said the conference theme of integrating computers and communications systems with special emphasis on information networking "is timely and appropriate" for Singapore.

He noted that the government had in October approved a national information technology masterplan, IT2000, with the goal of IT2000 of developing Singapore into an "intelligent island".

"Under this plan, we aim to use IT creatively to develop Singapore into a global hub, to boost our economic engine, to enhance the learning and potential of individuals, to link communities locally and globally, and to improve the quality of life," Lim said.

The three-day conference has attracted the industry's professionals from North America, Europe and Asia, who will listen to more than 140 technical papers to be presented.

## VIETNAM

### Television Station Completed in Mountain District

BK1812133091 Hanoi Voice of Vietnam Network  
in Vietnamese 0500 GMT 13 Dec 91

[Text] Hien District, Quang Nam-Da Nang Province, has completed the installation of a television station to receive programs from the Da Nang city television network. At present, thanks to good quality reception, compatriots in Hien District can watch television programs.

Thus, Tra My and Hien, which are two of the four mountain districts in Quang Nam-Da Nang Province—now have their own television stations to benefit local ethnic minority compatriots and people in adjacent areas.

### Dong Xuan District Commissions TV Relay Station

BK2711150991 Hanoi Voice of Vietnam Network  
in Vietnamese 1100 GMT 22 Nov 91

[Text] Phu Yen Province's Dong Xuan District recently commissioned a television relay station through satellite, built by the Phu Yen electronic enterprise with a total capital of 113 million dong.

Facilities at the station include a set of parabolic equipment, a 40-watt [as heard] color television transmitter, and a 35-meter antenna.

The station has received and relayed programs from the Vietnam Television Station. This is the second television relay station built to serve the people in the mountain villages. The first one was built in Son Hoa District.

## HUNGARY

### Link to International Data Exchange Network

92WS0108X Budapest FIGYELO in Hungarian 10 Oct 91  
p 27

[Article by J. K.: "Changing the System"]

[Text] Earlier when we talked about computerized data transmission everyone smilingly thought, in many cases, that someone got a floppy and then the printed out data and then personally carried it to the addressee. Later the possibilities changed a little. The IIF [national research and development] packet switched data transmission system was realized as an original development, something like the Hungarian orange in Peter Bacso's film "The Witness"—it was little and it was sour, but it was ours! That is, it was if you tried to do something serious with it.

The system change and the easing of the embargo have made it possible to think seriously here also of introducing a packet switched data transmission service connected to international data traffic. This will make it possible to connect the user and the computer databanks more quickly and substantially more cheaply than on a traditional telephone line. At the same time it would probably create a possibility for such services as, for example, the physical separation of a printing press and the composing systems or linking the editorial offices of papers published in several different places.

With the Hungarian Post Office breaking up into special branches and being reorganized, a favorable opportunity has been created for the transformation to take place very quickly, virtually instantly by Hungarian standards. Due to the peculiarities of the legal regulation at present computerized data transmission now is the province of Please Ltd., recently separated from the Hungarian Telecommunications Enterprise, and they immediately set about realization of a program begun earlier at MATAV [Hungarian Telecommunications Enterprise]. Users will be able to experience the first steps of this within days when the first Siemens made packet switching center goes into operation in the Budapest Varoshaz utca building of the Main Post Office. This will make the services of the Hungarian system equivalent to those of Deutsches Telecom, the West German data transmission enterprise.

The first measure taken by the new leadership was to reduce, effective 1 September, the entry fee for a data terminal connecting by direct line from the earlier 150,000 forints to 50,000 forints, in return for which they will bring the necessary lines to even the most isolated site, if it is technically feasible. (When will the MATAV telephone business make such a favorable decision?) Then it will be possible for the user to connect by direct line to the data switching center. Those who cannot spare so much at first need not fear for it is also possible to get into the system on a normal dial telephone line. (Here the base fee is 600 forints per month.)

In contrast to earlier systems this one will make it possible not only to initiate a call from the data stations but also for someone to call the data station—if the user does not rule

this out by a special request. Various logical channels for the physical links can be installed for the one-time entry fee; that is, more data link call numbers are possible, provided in return for a 150 forint fee per channel.

With the system it is possible to access large foreign databanks and to create data links directly with the computers of associated foreign enterprises. In this case, naturally, one must first come to an agreement with the owner of the receiving system to get entry passwords and access rights. The data transmission system only guarantees the accessibility of other systems; entry there, use of them, and the fees to be paid must be negotiated directly with the owner of those systems.

In contrast to earlier systems this one appears to be really useable for the equipment they are getting is the same as that to which the West German Post Office is switching from the earlier well thought of Datex-p network system. In the case of moderate use one data switched terminal means an expense of about 20,000 to 25,000 forints for the subscriber. Experience shows that this will pay for every small firm or private subscriber who up to now has called the Radio Austria system directly on a Vienna telephone number, or thus reached a Western databank.

As the system goes into operation we have succeeded in linking into the data circulatory system of Europe and the world. Perhaps not only foreign entrepreneurs, but domestic ones as well will recognize this new opportunity.

### Radio-102 Banned Due to Violation of Contract

LD1812230491 Budapest Kossuth Radio Network  
in Hungarian 1600 GMT 18 Dec 91

[Text] The recently launched Radio-102 station has been banned because, in contrast with the original license, it has been transmitting Hungarian-language programs on the frequency of Radio Bridge. The Frequency Management Institute has stressed that, according to the broadcasting licence, the station can only transmit English-language programs under the name Radio Bridge. Because of the violation of contract, the radio license is to be withdrawn and the station closed.

### New Satellite Telecommunications System To Be Introduced

AU2911165091 Budapest MAGYAR HIRLAP  
in Hungarian 26 Nov 91 p 10

[MTI report: "Banks Could Also Use It—New Satellite Telecommunications System"]

[Text] The Hungarian telecommunications infrastructure can expect a sudden improvement thanks to the initiative announced by the Hungarian Broadcasting Company [Magyar Musorszoza Vallalat], the BCN Communications Network Planning and Servicing Inc. [BCN Kommunikacios Halozati Tervezo es Szolgaltato Kft.], and MTI. The aim of the joint venture is to create and operate a satellite data transmission system—the so-called VSAT—that will satisfy the needs of a great variety of consumers. MTI recognized the possibilities offered by satellite telecommunications a long time ago, but the apparatus necessary for



modern technology and the cost of the services provided have only now reached a level where plans can actually be implemented. The more subscribers there are, the cheaper the service, so the group is not just trying to satisfy its own needs.

By the beginning of next year, the system is expected to be able to establish satellite telecommunication between any two locations—a communication that is much safer than a cable link—for the computer systems of banks, insurance companies, and government organizations. For this purpose, BCN Inc. will be providing its experience gained in package-related data transmission technology [csomagkapcsolt adatviteli technologia], the Broadcasting Company will be providing its experience in microwave technology, and MTI—as the Hungarian firm with the largest private data network—will be providing the results it has achieved in the field of data processing.

The group plans to include a foreign company as a fourth partner. Numerous firms have already signalled their interest in subscribing to the services. The group has announced that another of its important aims is to ensure that MTI's network of correspondents, newspapers, and news media can benefit from the advantages of modern technology in the near future. In the next few weeks, the group will also be demonstrating its system in practice.

#### **MATAV Analyzes Present, Future Development**

*92WS0113X Budapest COMPUTERWORLD/  
SZAMITASTECHNIKA in Hungarian 17 Oct 91 p 25*

[Article by Huba Bruckner: "MATAV, They Have Enough Plans"]

[Text] The opening talk at the EEMA [expansion not given] conference was given by Pal Horvath, director general of the Hungarian Telecommunications Enterprise [MATAV], with the title "MATAV In The Service of Progress (and Transformation)." He reviewed the present status of the services and then summarized the three-year development plans of MATAV.

In the years between 1986 and 1990 (this was the period of the Seventh Five-Year Plan), they installed more than 400,000 new telephone lines, the conversion to digital technology began, and they made preparations to formulate and realize a longer term developmental plan. In January 1989, for the first time in the region, regulation and operations were separated at the Post Office. The way was opened for private investors, who could acquire ownership rights, up to 49 percent, in providing Hungarian telephone service. The Post Office was transformed into three independent enterprises: the Hungarian Telecommunications Enterprise, the Hungarian Broadcasting Enterprise, and the Hungarian Post Office Enterprise. The next station in the development of MATAV was its conversion into a joint stock company.

#### **Telecommunications at Present**

As of the end of last year about 1 million telephone stations were in operation. Of these 80,000 lines were created in the past year, in 1990, which corresponds to an annual 8

percent increase. Although this is the highest value in recent years, it still lags behind data characteristic of developed countries. Therefore, we cannot be satisfied with the growth index, because in the meantime the number of those waiting for lines grew significantly. At the end of 1990, there were 607,000 on the waiting list, of whom 253,000 were in Budapest. The average waiting time is 12 years. (It is estimated that in Hungary today there is a need for at least 1.5 million lines in addition to those existing, two and a half times the present capacity.)

The very large proportion of shared service lines further reduces the value of the existing line capacity. (This index is especially bad in Budapest.) The existence of shared service stations simply cannot be continued as these cause a deterioration in the level of services. Thus in the future, in-so-far as possible, only main lines should be installed. After 1993, one can count on a reduction in the number of existing shared service lines as the old exchanges are replaced.

Only automatic telephone exchanges operate in Budapest now, but in the provinces only 88.5 percent of the lines are connected automatically. Half of the telephone subscribers in Hungarian villages are still served by manually connected exchanges. This also means that they can use their telephones only from 8 in the morning until 4, or in a better case 6, in the afternoon.

Of the existing lines 87.4 percent can be used for domestic long-distance calls and 71.4 percent are linked into the international long-distance network. Seventy-five percent of the Hungarian towns—but only 34 percent of the villages—are connected to the domestic long-distance network.

The mobile telephone has been a real success. Since the service was introduced in October 1990, the number of subscribers has increased, as of July 1991, to 4,500. Since summer the service can be used not only in Budapest and environs but also along the M7 highway and in the Balaton area, along the M1 highway, and in Miskolc and in the zone of the road leading to Miskolc.

Of those services not based on speech the experimental packet switched network had 200 data stations at the end of 1990, and the number of these may increase by an additional 200 or 300 stations by the end of 1991.

Although the number of telex stations is increasing at present, and this trend can be expected in the coming years too, the telex traffic is gradually decreasing. The number of stations is now 14,500. An SFU (Store and Forward Unit) system was put into operation in 1990; this makes possible the introduction of modern telex services. The telex-teletex converter also began its work last year. (Teletex is actually a modern version of telex—passing on messages from storage to storage.) It can be seen clearly today that throughout the world teletex has proven to be a deadend, while telefax has been more successful than expected. At the end of 1988 there were 1,057 fax subscribers in Hungary; their number increased by 4,661 in 1990—in one

year—and at the end of last year the number of fax subscribers reached 9,693. The fast growth trend will continue.

So far the domestic appearance of CEPT [European Conference of Post and Telecommunications] standard videotex has found a most mixed reception. A more significant increase in the number of subscribers is hoped for with the spread of DECODIX software which makes personal computers suitable for a videotex mode. And interest would certainly increase if there were more data stations of general interest and if the accessibility of international services were solved. On the other hand, Minitex, which offers the simplest message service, has been successful; for this one can use portable terminals with acoustic connections. At the end of 1990, the number of subscribers was 428; in 1991 technical conditions were created to expand the number of terminals to 800. Subscribers not only can call one another but also can call telex subscribers anywhere in the world.

#### **A Three-Year Development Plan**

MATAV published its three-year plan in October 1990 and modified versions of it were prepared in February and June of this year. It appears unambiguously from this that they will continue to strive for a leading role in the area of communications and that they are counting on very significant foreign capital to realize the plans.

A modernization of the basic network is a precondition for these developments. Two-thirds of the main line network will be built up with optical cable. They plan to install about 2,500 kilometers of optical cable. The rest of the network will use digital microwave connections. This latter will represent the bridging of about 1,500 kilometers.

At present four of the 19 counties are reached by digital transmission lines, or digital switching exchanges are used in them. An additional six county seats will be connected into the digital basic network in 1992 and the remaining nine will be connected in 1993.

In the three-year period MATAV plans to create 150,000 crossbar switching telephone lines and 490,000 digital switching lines. Some of these lines are intended to modernize existing lines. So the total capacity expansion is not the sum of the two numbers (640,000) but rather 554,000.

According to MATAV estimates other operators may create about 400,000 new lines. So the actual line capacity of the country—taking into consideration modernization of existing lines as well—may reach 1.5 to 1.75 million by 1993.

By 1993 seventy percent of the telex subscribers will be linked to the international network via electronic switching centers. MATAV also plans to provide domestic users with artificial satellite data transmission possibilities to satisfy high-speed data transmission and video-conference needs.

Construction of the first data transmission earth station can be expected this year.

Use of digital technology is already a natural requirement at the level of subexchanges. MATAV plans to solve the creation of subexchanges with Comex. Very strong competition can be expected in this area.

By the end of 1993, the Westel NMT 450 mobile telephone service may have 50,000 subscribers. In addition to the 450 megahertz frequency range Westel will try for a leading role in 900 megahertz radiotelephony.

Radioccontact is the name of MATAV's paging service. Those who prepared the development plan consider it conceivable that the number of subscribers to the service may reach 32,000 by the end of the three-year period, or by New Year's Eve 1993. The firm also plans to build and operate a cable television network.

The plan reckons that in addition to domestic traffic there will also be an increase in the need for international speech and nonspeech services. In all certainty the growth indexes for nonspeech services will be greater percentagewise.

Finally it is worthy of note that when preparing its plans MATAV strove to follow the international standards and trends, which cannot be imagined without close cooperation with various international organizations. The EEMA is one of these organizations.

## **POLAND**

### **Citizens Band Radio Enthusiasts' Association Debuts**

*LD0712224191 Warsaw PAP in English 1714 GMT  
7 Dec 91*

[Text] Warsaw, Dec. 7—The Polish Federation of Citizens Radio Communication Associations was established in Warsaw on Saturday by CB radio enthusiasts. A decision was taken to join the European CB Federation.

### **New Telecommunications, Postal Bodies Established**

*LD0412153791 Warsaw Radio Warszawa Network  
in Polish 1400 GMT 4 Dec 91*

[Text] After 63 years, today the Polish Post, Telegraph, and Telephone enterprise was split into two state companies, Polish Posts and Polish Telecommunications, when Minister Jerzy Slezak, implementing the Law on Telecommunications, signed the appropriate act on the division of the enterprise.

The division of assets will continue for several years, but a special commission already decided today that the telecommunications company will receive assets worth 11 billion zlotys and the postal company will receive assets worth 15 billion zlotys.

## YUGOSLAVIA

### Postal, Telecommunications Links With Germany Continue

*LD1412045891 Belgrade TANJUG in English 1422 GMT 13 Dec 91*

[Text] Belgrade, December 13 (TANJUG)—The postal and telecommunications services between Yugoslavia and Germany are operating without any problems, the Community of Yugoslav Posts, Telegraph and Telephone Services has said.

Postal deliveries from Yugoslavia are being transported by international trains which also carry deliveries from other countries, so that any classification of letters, cards and parcels is practically impossible with regard to the time needed. However, air mail is re-directed to other routes.

All deliveries except parcels from the Yugoslav Republic of Serbia to the Republic of Croatia are transported via Slovenia while those in the opposite direction are irregular and make a detour, largely via the Republic of Bosnia-Herzegovina, says the community.

The Belgrade and Zagreb postal services are currently negotiating that postal deliveries be sent via Budapest in the future, with which the Hungarian railway has agreed in principle.

### Subotica Gets New TV Channel

*LD0412103891 Belgrade TANJUG Domestic Service in Serbo-Croatian 0403 GMT 3 Dec 91*

[Text] Subotica, 3 Dec (TANJUG)—Since the beginning of the current month the population of Subotica has been given the opportunity to tune into a new independent television channel whose content is devoid of any political hue but is full of music, advertisements, and documentary features.

The new television studio has been set up by businessman Janos Pap and the Palic and Veterinarski Zavod (Veterinary Institute) joint-stock companies. The new channel will be carried via channel 23 of the Novi Sad television studio and at a later stage via the PTT cable network.

This is the first television studio to be set up jointly with private and public capital and to focus on business rather than politics.

## REGIONAL AFFAIRS

**Radio Caracol, Radio Centro Sign News Service Agreement**

*PA1312202591 Santa Fe de Bogota Emisoras Radio Caracol Network in Spanish 1200 GMT 13 Dec 91*

[Text] An information integration agreement was signed on 12 December in Quito between Colombia's Radio Caracol and Ecuador's Radio Centro. This agreement is expected to be the basis of the first Latin American news service. [sentence as heard]

In a few minutes we will be talking to Carlos Ruiz, our correspondent in Ecuador. Mr. Ruiz is the editor of Caracol satellite information service, which has been simultaneously transmitted in Colombia and Ecuador every day since 1 December.

**Ecuadoran Information Official on Media Link**

*PA1612182491 Santa Fe de Bogota Emisoras Caracol Network in Spanish 1200 GMT 13 Dec 91*

[Interview with Ecuadoran Information Secretary Dr. Polo Barriga, by Colombian reporters Carlos Ruiz and Dario Arizmendi and Ecuadoran reporter Mariana Velazco; Barriga speaks by telephone from Quito—live]

[Excerpt] [passage omitted] [Ruiz] Dr. Polo Barriga, the Colombian people are listening to you. I would like you to convey, on behalf of the Ecuadoran Government, the feelings of the Ecuadoran people regarding the beginning of this integration between Emisoras Caracol Network and Ecuador's Radio Centro.

[Polo Barriga] There are two very big feelings that I cannot separate. First, I have been a radio and television communicator for the past 27 years. On the one hand, I am experiencing profound personal and professional satisfaction. I am also very happy, because of my heart-felt belief in integration. Our countries have been working toward integration for over 20 years through the Cartagena Agreement, for example, but it is only recently, in the past year or two, that we have made decisions that are truly important for our Andean countries.

We are reuniting, because we were together 170 years ago under the banner of The Liberator Bolivar. This is a rebirth, a great marriage. I am pleased and happy, and I believe that the Ecuadoran Government, which is especially integrationist, congratulates these two great firms that are setting an example for other Latin American communications firms. This is possible; there are ways to do these things, ways to unite.

[Arizmendi] Dr. Barriga, Andres, Mariana, Carlos, you can rest assured that we are making history. As of January 1992, we are going to link up with Venezuela, Panama, and almost 200 radio stations that broadcast in Spanish to the United States. This is true informational integration. It could not be understood how, for example, Colombians, Ecuadorans, Venezuelans, Panamanians—in short, Latin Americans—could know more about Europe, East Europe,

Asia, and Africa than about the problems of our own people. That is why this effort is important.

Dr. Polo Barriga, what do you think is the profound significance of this meeting of the airways between Emisoras Caracol and Radio Centro? What prospects do you foresee for this experience?

[Barriga] I view this experience with great optimism. As I said a few moments ago, my distinguished friend, when one is a communicator and is working with an integrationist government, you can only congratulate yourself. I believe that this experience has an enormous future and that what you said a few moments ago is basic. Somehow, our Third World countries south of the Rio Grande have been neglected by the communications of the leading worlds. If we fail to unite and fail to get to know each other better through the collective media, how else and how better can we communicate?

I believe that Ecuador and Colombia are the first to be able to unite in a very solid embrace, but we know that in the near future our radio communications will also embrace Peru, Venezuela, Bolivia, Panama, and all of Latin America. My heart-felt congratulations to all.

[Velazco] Dr. Barriga, we would like very much to hear your views on the leading problems that are shared by Colombia and Ecuador. We must seek specific information in order to seek possible solutions and further integration.

[Barriga] I believe that our realities are the same. We have shared the same ancestral mestizo race for centuries; all of Latin America experienced the events of 500 years ago, and it is obvious that we currently share the same difficulties. I believe that the leading problem shared by the Latin American mestizo people—from which, obviously, neither Colombians nor Ecuadorans can escape—is a need to improve the distribution of our obvious wealth, the wealth of Colombians, Ecuadorans, and Latin Americans. We have extraordinary natural resources. We have proven this through a series of farm products for exportation as well as through an stubborn industrial effort, especially by Colombia, as a South American example. We know perfectly well that this wealth has not been properly distributed, and I believe that we should tackle this problem at the roots. [passage omitted]

## BRAZIL

**Radiobras Starts News Service Project to Interior**

*PY3011184691 Brasilia Radio Nacional da Amazonia Network in Portuguese 0900 GMT 30 Nov 91*

[Text] Radiobras [Brazilian Radio Broadcasting Company] Chairman Ruy Pontes has launched in Rio Grande do Sul State a pilot project to expand media services to the country's interior. In the project's first stage, 240 radio and television stations and 60 newspapers will receive AGENCIA BRASIL news.

Ruy Pontes explained to representatives of 26 Rio Grande do Sul advertisement and communications organizations

the Radiobras objective of transmitting the correct version of governmental actions with credibility, good human resources, and pioneer technology to all corners of the country.

## MEXICO

### Salinas Orders Discontinuation, Sale of Imevision

PA1112035091 Mexico City NOTIMEX in Spanish  
1854 GMT 10 Dec 91

[Text] Mexico City, 10 Dec (NOTIMEX)—President Carlos Salinas de Gortari has decreed the discontinuation and sale of the Mexican Television Institute (Imevision) because it is not economically viable and it is inadvisable to keep it operating as a state institute.

The decree was published in the official newspaper of the Federation and established that the Government Secretariat proposed the elimination of the institute "considering the public interest and the priorities of the national economy."

It was unofficially reported that Channel 13 will continue to work as a station of the Mexican state and the other two channels will just be reorganized.

Imevision was created on 25 March 1983 to run all the television stations, production units, repeaters, and television networks owned by the Federal Executive Branch.

The document noted that the privatization of state institutes is aimed at improving the efficiency and productivity of the public sector, as well as assigning resources to priority areas.

The process to privatize and sell Imevision will not exceed six months. This will be implemented by the Government, Programming and Budget Secretariats, and the Comptroller General's Office.

The document added that the rights of Imevision workers will be respected in accordance with the law and that the necessary steps will be taken so that the dismantling process will be carried out in a timely and effective fashion.

### Station Explains Status Following Presidential Measure

PA1112201091 Mexico City Red Nacional 13 Imevision  
Television in Spanish 1300 GMT 11 Dec 91

[Report by Jaime Guerrero]

[Text] On 10 December the decree ordering the closure and liquidation of the Mexican Television Institute was published in the official gazette of the federation. This decentralized public organization was designed as an integrated operation of television stations, production units, relay stations, and television networks affiliated with the federal executive branch. The institute has served its purpose and the elimination and liquidation have been ordered because Red Nacional 7 and Channel 22 have been separated from the federal government.

Channel 13 was allocated to the Mexican Radio and Television Corporation, a mixed-capital corporation in which the state owns a majority of shares. Therefore, the channel's relationship to the institute was only operational.

The closure and liquidation of the Mexican Television Institute does not affect the existence of the Mexican Radio and Television Corporation, which owns Channel 13. However, the name Imevision will be retained as a trademark to be used by Channel 13 and its national network of relay stations.

## NICARAGUA

### Telenica Television Station Begins Broadcasting

PA1312033491 Managua BARRICADA in Spanish  
9 Dec 91 p 9

[Article by Freddy Potoy]

[Text] Carlos Briceno, director of the country's third television station, reported on 8 December that channel eight will begin broadcasting its television signal to the residents of Managua on 9 December at 1500 [2100 GMT].

The test transmissions were carried out on 7 December, and the station's signal will only reach the capital.

The former director of the government's television station said that his television station is another option for Nicaraguans, who can only "punish themselves" with the programs on channels six and two.

He said that channel eight does not respond to any political tendency or economic group. The station's only interest is to be a catalyst, capable of offering alternative solutions to the country's problems through the participation of individuals from different sectors.

Briceno said that he and his wife, Desire Montealegre, are investing \$250,000 in the installation of the television station.

"We are an autonomous station and we wish to perform modern journalism. Nicaraguans will have new programming alternatives on their screens," he said.

Managua will be the station's coverage area, as the advertising market is concentrated in the capital. Up to now the station has about 20 companies as sponsors.

Briceno thanked the Sandinist Government for granting the frequency rights that will allow him to offer a third television signal in Nicaragua.

The director of channel eight said that he had confidence in Nicaraguans, who demand quality programming and want to know the country's real situation.

Briceno announced that the station will begin broadcasting daily at 1500. It will run children's programs until 1800; an international newscast from 1830 to 1900; a Brazilian soap opera from 1900 to 2000; the "channel eight independent

newscast" from 2000 to 2030; another soap opera from 2030 to 2100; and various movies every day from 2130 to 2300.

He pointed out that during the half-hour "independent newscast," there will be a debate segment to discuss the most important issues on the national scene. A well-informed and capable moderator is urgently needed to anchor this program.

Channel four, a fourth television station, may appear in the near future. The station seems to be facing certain financial difficulties that are delaying the beginning of broadcasts.

Another television station, channel twelve, has made progress in preparing its transmitters and programs, but its owners have not yet announced when it will begin broadcasting.

#### **Radio Corporacion To Install New Equipment**

*PA2112042691 Managua Radio Sandino in Spanish  
1212 GMT 19 Dec 91*

[Text] In the next two months, Radio Corporacion will install new equipment donated by U.S. agencies and will reorganize its programs in an effort to get away from the

radical anarchy scheme in which the station has been participating with far-right political interests for more than 20 years.

Persons linked to Radio Corporacion report that the changes will be gradual until the station acquires the new profile of a commercial radio station that defends political interests with moderation.

Radio Corporacion, founded in 1965, destroyed in Somoza's time, sabotaged twice in the past two years, will install transmitting equipment, some of which was built by a Costa Rican corporation and some bought in the United States by several U.S. Government agencies to be donated to Nicaragua.

The schedule of programs such as "The Nine O'Clock Surprise" may be changed. Something similar may happen to other time slots, which would be directly exploited commercially by the station. Radio Corporacion is in the process of installing its new equipment and revising its programs. The station's only sure programs are "Six O'Clock Sharp," "11 O'Clock Sharp," "Five O'Clock Sharp," and "10 O'Clock Sharp," as well as "Pancho Madrigal" and "Love Letters to Nicaragua" by Fabio Gadea, the station said.

## REGIONAL AFFAIRS

### Radio, Television Agreement Signed With Azerbaijan

*LD0212151791 Tehran Voice of the Islamic Republic of Iran First Program Network in Persian 1030 GMT  
2 Dec 91*

[Text] With the commissioning of a satellite station in Baku, the Soviet Republic of Azerbaijan can now enjoy programs of the Vision of the Islamic Republic of Iran. This station has been set up and made operational on the basis of an agreement signed between the Voice and Vision of the Islamic Republic of Iran [VVIRI] and the Soviet Republic of Azerbaijan's radio and television company.

Also, according to a Central News Unit report, on the basis of a protocol signed between the head of Baku's radio and television company and the director of VVIRI in Tabriz, the two parties will embark on bilateral relays of television news reports and programs. According to the Tabriz VVIRI director, cooperation between the VVIRI and Baku radio and television has begun with the relaying of television programs in Azeri. Several programs, such as "The Path to Sabalan", Islamic feasts, and revolutionary anthems, have so far appeared on Baku television. On the basis of this agreement, the VVIRI will supply the technical needs of Baku's radio and television.

### Egyptian 'Satellite Channel' Soon Available

*LD1512104891 Rabat MAP in English 1242 GMT  
13 Dec 91*

[Text] Cairo, Dec 13 (MAP) The Egyptian "Satellite Channel" will soon be available in Morocco following agreement between the two countries to provide the necessary technical facilities, Egyptian Information Minister Safwat Sharif said.

Similar talks with Tunisian officials are under way to provide the same services to Tunisians, he said.

Egyptian technicians with equipments are to visit Rabat where the ground station will be located to relay programmes.

Ten African countries will receive programmes two hours a day, while Libya and Yemen will be serviced 16 hours a day.

The "Satellite Channel", using "ARABSAT", was launched 18 months ago.

## BANGLADESH

### Seminar on Radio, Television Held in Dhaka

*92WP0089A Dhaka THE NEW NATION in English  
23 Oct 91 pp 1, 8*

[Text] The Deputy Leader of the House, Prof Badruddoza Chowdhury, MP, yesterday said that any consideration of autonomy for the public sector media like radio and television would pre-suppose some hopes, aspirations and activities of the people giving importance to their cultural aptitude.

Prof. Chowdhury said that under these principles the activities of the democratically elected government would

deserve the due importance. At the same time, he added, the opposition should get its due coverage.

He was speaking at the inaugural session of the two-day seminar on autonomy and democratisation of radio and television organised by the Sammilita Sangskritik Jote (combined cultural front).

Prof. Chowdhury said that the question at issue deserved serious thinking before any decision. He asked, "Can an organisation taking all government facilities run like a private sector organisation?"

Prof. Chowdhury said it also deserves to be considered what sort of professionalism was reflected in announcing the results of the general elections of 27 February when the news of another political party was given more importance than the political party which emerged as the majority party.

We want the autonomy of radio and television but it definitely deserves consideration that such autonomy does not hamper national interest, Prof. Chowdhury said.

Deputy Leader of Opposition Abdus Samad Azad, MP, Barrister Syed Ishtiaq Ahmed, poet Shamsur Rahman, CPB President Saifuddin Ahmed Manik, Rashed Khan Menon, MP, Barrister Mainul Hosein, Prof. Khan Sarwar Morshed, Prof. Zillur Rahman Siddiqui and Sangskritik Jote President Faiz Ahmed, among others, spoke.

Prof. Chowdhury said that in his own view a serious question like autonomy of radio and television would deserve serious consideration instead of taking a hasty decision which could lead to many mistakes.

He said that there was need to train ourselves and any move towards autonomy should be taken phase by phase.

Prof. Chowdhury said that in most of the areas our experiences with autonomy is far from happy. "We have faltered a lot," he added.

In considering the question of autonomy he said it must be clearly defined how far there would be government control.

On cultural programmes, he said, the national aspirations rather than the supremacy of certain coteries should be reflected by both radio and television.

Prof. Chowdhury said that independence and sovereignty of Bangladesh cannot be allowed to be infringed by any programme of the Radio and the Television. He clearly said that slightest indication of loyalty to any foreign country cannot be allowed to be broadcast or telecast.

He said that under the rules the functionaries and personnel of the two media cannot reflect their personal political opinion and the practice to the contrary should make them unfit to serve such media.

The autonomy of the universities, he said, was not providing the nation with the desired results.

He recalled that the television did not fairly cover the announcement of the general elections of 27 February.

He said that it was obvious that the activities of the democratically elected government would constitute a

major part of the national activities. Therefore, he said, the people would want to know about them and the two media should cover them with due priority. Prof. Chowdhury said that the people would want to know about the activities of the prime minister, the ministers and the role and the outlook of the government with regard to the problems and progress of the country.

Prof. Chowdhury said that there was no problem for implementation where there is consensus.

The Deputy Leader of opposition, Abdus Samad Azad, MP, called for making radio and television autonomous as per the declaration of the three alliances.

Abdus Samad Azad said that the country was going backwards in the areas of economy, education and law and order.

Syed Ishtiaq said that it was unfortunate the way the two media had been made into government media forgetting the pledge of the three alliances.

Syed Ishtiaq said it is desirable to show that the media and the government are separate. He called for making them truly public media.

Barrister Mainul Hosein, Chairman of the Editorial Boards of THE NEW NATION and the ITTEFAQ emphasizing the need for autonomy of radio and television said, we have to work unitedly to protect democracy and make it strong. Because it is only in a democracy that radio and television can enjoy autonomy and freedom, he added.

Barrister Hosein said, we have to learn to behave democratically and respect democratic values. Democracy takes years to build itself on a strong footing, he added.

Barrister Mainul Hosein urged that, an elected government has to be accepted as people's government and not merely as a party government. A people's government cannot be viewed in the same way as an autocratic government of an individual.

Barrister Hosein dwelling on the need of policy guidelines and law said, it may take some time to complete the process of organising television and radio on the basis of autonomy and freedom. But the government should free government controlled Trust newspapers immediately, he added.

He said, autonomy to radio and television is to be ensured not for expressing the views of those few working there, but for reflecting truthfully the hopes and aspirations of the people. Preparations for giving autonomy to radio and television should be undertaken now, Mr. Hosein added.

CPB leader Saifuddin Ahmed Manik said given sincerity he saw no problem in making the two media truly autonomous.

Rashed Khan Menon, MP, supporting the views of Prof. Badruddoza Chowdhury of the ruling party said that there should be a system of accountability while allowing autonomy to the two media. He suggested that the two media authorities should be made accountable to Parliament.

Rashed Khan Menon said that if radio and television gave the correct information it would help democratic politics and at the same time end the reliance on foreign media.

Poet Shamsur Rahman said that the movement should be on until the radio and television were given autonomy, as vehicles for free thought and cultural development.

Dr. Anisuzzaman said that government money meant money of the people. So, he said, radio and television financed by the government should reflect the hopes and aspirations of the people.

Prof. Z.R. Siddiqui said given good will there was always a way out.

## EGYPT

### Officials Depart for London Talks on Satellite Channel

NC1712110491 Cairo MENA in Arabic 1020 GMT  
17 Dec 91

[Text] Cairo, 17 Dec (MENA)—Amin Basyuni, chairman of the board of trustees of the Radio and Television Union, and engineer Faruq 'Amir, chief of the broadcast engineering sector, left Cairo for London this morning to follow up the technical and engineering steps related to the new teletext channel. Basyuni and 'Amir will also discuss ways to ensure the continuation of the Egyptian Space Channel [ESC] since the orbit of the Arab satellite (Arabsat) has shifted one degree. They will also hold talks with officials in the British cable company to acquaint themselves with the quality of ESC's reception there.

### Officials Deny Space Channel To Stop Operating

NC1312211791 Cairo MENA in Arabic 2025 GMT  
13 Dec 91

[Text] London, 13 Dec (MENA)—Officials at the Egyptian Space Channel have denied reports here that the channel's transmission will stop as of today, Friday, for cable subscribers in London.

The officials asserted to all subscribers in London that transmissions will continue. They pointed out that the Egyptian Space Channel has secured transmissions to subscribers in accordance with an agreement with the National Trans-Communications Company [name as received] in London via the present channel or other guaranteed alternatives.

In Cairo, Information Minister Safwat al-Sharif asserted that the channel's transmission is continuous and that all the necessary measures have been taken with the Arab Satellite Communications Organization, Arabsat, and information ministries in fraternal Arab states in order to guarantee continued Egyptian Space Channel transmissions via alternative channels.

The information minister also has affirmed that it is untrue that the channel will stop operations. He asserted that the problems which may arise when the first Arab satellite goes out of orbit, as expected, have been tackled.



## INDIA

### Information Minister Tells Policy on Media

92WT0041A Bombay *THE TIMES OF INDIA* in English  
24 Oct 91 p 11

[Unattributed article: "Panja Rules Out Law on Cable TV"]

[Text] Madras, Oct. 23—The minister of state for information and broadcasting, Mr. Ajit Kumar Panja, has ruled out central legislation to regulate cable television operation. What is needed is a set of guidelines, said Mr. Panja, adding that the Tamil Nadu legislation could serve as a model for other states in framing their own guidelines.

An amendment bill adopted by the Tamil Nadu assembly last month provides for a licensing system governing cable TV operators. The 1984 act regulating exhibition of feature films through VCR did not cover the cable TV system. Hence, the amendment bill, which requires licensed cable TV operators to secure a letter of consent from those holding the copyright of the films before exhibiting them. Any violation of the provisions is punishable with a fine of Rs. 100,000 or imprisonment for three years. The Centre had circulated the Tamil Nadu legislation for guidance to various states, said Mr. Panja.

Speaking to members of the Madras Press Club, the I and B minister refuted allegations of corruption in production of TV serials with Doordarshan funds. "I have been hearing complaints in this regard, but no one has come with a specific instance of corruption," said Mr. Panja.

He attributed the critical delay in Doordarshan response to the Uttar Pradesh earthquake to lack of resources. The first visuals on the quake which wrought havoc in the U.P. hill areas on Sunday were received at Doordarshan headquarters this morning. The government media did not have the resources to hire a helicopter for the TV crews. Nor, was there any UP-linking facility for the Doordarshan camera team in the quake-hit area to send visuals to the New Delhi, TV centre, said the I and B minister. As he put it: "We don't have the kind of funds made available to the BBC, which gives spot money to its reporters."

In response to a question regarding the expulsion of the Colombo-based AIR correspondent Mr. A. Karuppuswamy, the minister said it was wrong on the part of the Sri Lankan government to have expelled the correspondent for putting out an incorrect news report. Such lapse was not uncommon when reporters were required to work to a deadline. The AIR correspondent subsequently issued a correlation and also apologised for the mistake. The minister pointed out that the Sri Lankan government had not found any evidence to attribute motive to the AIR correspondent. Asked whether Colombo's action was directed against the Indian government, Mr. Panja said: "I don't think so."

On the question of granting autonomy to TV envisaged under the Prasar Bharati Bill, the minister said he was studying the report submitted by a committee that went into the question.

Reacting to a suggestion that the issue had been given a quiet burial, Mr. Panja said: "It is very much alive and kicking."

Asked about the arbitrary hike in the price of raw film stock by the Hindustan Photo Film Ltd. (HPF), Mr. Panja pointed out that the HPF had done it without consulting even the departments concerned in the government. He promised to take up the matter with the Prime Minister.

On the implementation of the wage-board award for newspaper employees, the minister said the government did not propose to intervene through suspension of a DAVP advertisements or stoppage of newsprint allocation to the unyielding newspapers. Any such move would be construed as an attempt to exert pressure on the media. It was for the employees to devise ways to persuade their management to enforce the Bachawat award. The government would, however, help the employees in their negotiations. Mr. Panja's message to the employees was: "Don't approach the government. Talk to your management."

The minister also made it clear that the government could not be expected to provide security to newsmen against terrorist threat in Punjab and Jammu and Kashmir. "It is becoming difficult for me to provide protection even to government employees," he added.

### Communications Minister Reports Telecom Progress

#### Visit to France, Possible Tie-Ups

92WT0040A Madras *THE HINDU* in English  
16 Oct 91 p 9

[Unattributed article: "Telecom Giants Keen on Tie-Ups, Says Minister"]

[Text] New Delhi, Oct. 15—The Communications Minister, Mr. Rajesh Pilot seems to have done some plain talking last week with a senior French Minister in Geneva where he had gone heading the Indian telecom delegation to attend the international exhibition Telecom 91.

The French telecom giant CIT Alcatel had been dilly dallying on upgrading its technology agreement with the public sector Indian Telephone Industries. At Telecom 91, Alcatel apparently tried to sell its new proposal for tying up with a leading Indian private sector company to make electronic switching systems. However, the Communications Minister asked his French counterpart about the seriousness of its industry to do business in India and particularly the possibility of updating ITI's technology by Alcatel.

Mr. Pilot, at a press conference today said the French Minister summoned the Chairman of Alcatel and wanted to know about the status of the technology transfer to ITI. The Alcatel chief reportedly said he would get back soon. At this he was reminded that in June 1991 an agreement was signed between ITI and Alcatel for upgradation of technology. But till date nothing had been heard. They had promised that Alcatel would send its offer incorporating P 11E technology and perhaps also a later version early next week for the consideration of Department of Telecommunications, the Minister said.

Wagle takes over from Pitroda: An aspect of Mr. Pilot's briefing was the absence of Mr. Sam Pitroda, Telecom Commission chief. Asked about it, Mr. Rajesh Pilot said "the Prime Minister has appointed Mr. H. P. Wagle, till now Member Services of Telecom Commission, as its new Chairman in place of Mr. Pitroda." At the press briefing Mr. Wagle was sitting by the side of Mr. Pilot.

Mr. Pitroda has been appointed Advisor to the Prime Minister on Technology Missions. The change was not expected so soon, but it now appears that the Prime Minister wants the right people at right places.

Referring to the possibility of global telecom giants entering the Indian scene, Mr. Pilot said a seven-member committee had been formed in the DOT to assess the proposals which in all probability might be submitted before the end of next week. He allayed fears about duplicity or multiplicity of telecom technologies and said "the best in the country's interest would be chosen." The country simply could not afford to miss the global telecom revolution, he said.

While admitting that global giants were only keen on sharing the Indian market, Mr. Pilot said the market strength would be used on a mutually acceptable basis. First, the intending company would have to manufacture the equipment in India as per the provisions of the new industrial policy. Second, it would have to guarantee transfer of latest technology in two to three years.

Mr. Pilot said there was tremendous response from giants such as AT&T, Siemens, NEC, Fujitsu, Ericsson and Alcatel to set up manufacturing facility in India. But all of them wanted to know whether their complete production would be bought by the monopoly buyer DOT. The actual purchase ratio could be worked out based on the Eighth Plan resource allocation and switching projection. For the Eighth Plan (1992-97), the DOT had submitted a Rs. 40,000-crore resource scenario with Rs. 10,000 crores being raised through bonds and the balance from internal generation. While some of the companies including Siemens and Fujitsu would like to tie-up with State Government organisations, Ericsson and Alcatel had shown interest in the private sector.

Privatisation: Mr. Pilot said that as part of privatising the telecom services, it had been decided to allow the private sector to operate value-added services including video conferencing, paging and cellular phones. Referring to cellular phones, he said by the year end the DOT would be in a position to identify the technology, the number of lines/connections to be covered by it and the ratio between cellular and mainline exchange. When asked about C-DOT, he said its exchanges were doing well in the rural areas.

#### **Alcatel Offer, Manufacturing Expansion**

92WT0040B Madras *THE HINDU* in English  
25 Oct 91 p 10

[Unattributed article: "Alcatel Offers Free Knowhow"]

[Text] New Delhi, Oct. 25—The Minister of State for Communications, Mr. Rajesh Pilot, announced here today that the French telecom giant CIT Alcatel has agreed to

transfer its latest switching technology OCB-283 to its Indian partner Indian Telephone Industries (ITI) totally free of cost. A letter from Alcatel conveying its decision was handed over to him personally on October 21 which was the deadline set before the French company to act.

Describing Alcatel's response as positive, Mr. Rajesh Pilot said "what could not be achieved in less than two weeks." "This was a substantial forward movement in meeting India's telecom requirement."

Speaking to presspersons here today, the Communications Minister reiterated the statement made at his first press conference on July 8 last that the Department of Telecommunications (DOT) had an open mind regarding induction of new switching technology. The new industrial policy announced subsequently on July 24, included switching and other telecom equipment in the list of 34 high-priority industries where government permitted 51 per cent foreign equity with automatic clearance facility.

Panel studying proposals: Since then major global telecom giants evinced keen interest to come to India. In order to assess the proposals from them, who included Sweden's Ericsson and Germany's Siemens, a high-power committee had been set up under Mr. U. V. Nayak, Member Technology in the Telecom Commission. Mr. Pilot said after the committee submitted its report by the end of this month DOT would examine the matter in greater detail that may also include the possibility of inducting new switching technology. He said he would give priority to the interest and requirement of the country before any decision was taken on the subject of fresh switching technology. At the same time he also declared that C-DOT would continue to play an important role in the country's telecom sector.

According to Mr. Pilot, the country's network at present had 5.2 million lines but the waiting list was over 22 million. The past trend indicated that with the release of a large number of new connections, the waiting list also grew faster. For instance, during the five months since April 1991, the waiting list grew from 19.59 lakhs to 22.23 lakhs—an increase of 2.64 lakhs or 13.5 per cent.

Huge task: The revised Eighth Plan proposal envisaged provision of 11.6 million gross capacity addition. Accounting for replacements, net capacity addition need would be 9.3 million and net new connections 7.5 million. This would need special efforts, he said. Even if India were to match the telephone to population ratio of 5.5 to 100 persons in Brazil and 7 per 100 in Malaysia, the country would require nearly 50 million connections compared to only 5.2 million lines in the network at now.

Describing the task of meeting the telecom demand as stupendous, Mr. Pilot said it was in this context the new industrial policy assumed importance. It had, therefore, been decided to increase the capacity of 8 licensed manufacturers of C-DOT design equipment (512-port switch) to one lakh per year, upgrade E-10B technology along with increase in ITI's capacity and finally identification and induction of new technology and setting up of production facilities based on it in the country.

Asked about the location of production unit based on the new OCB-283 technology, Mr. Pilot said the DOT had sent a detailed note to ITI headquarters in Bangalore. Perhaps by next week a clear picture would emerge on the issue of both location and the additional investment that would be required to induct OCB-283 technology. Only after that a decision would be taken as to whether the new technology would be deployed in Bangalore, Rae Bariely and Palghat or Mankapur ESS factory should go in for new update.

**Decentralisation likely:** The Communications Minister indicated the possibility of decentralising certain functions of ITI so that production efficiency improved. On the possibility of Alcatel tying up with private sector group of Dr. B. K. Modi, he said "we were keen that Alcatel should first fulfil its obligation towards the public sector ITI."

Referring to apprehensions raised in certain quarters that induction of new technology would hamper the development programme of C-DOT, Mr. Pilot said 'there was absolutely no need for such apprehensions.' He said the DOT was committed to accord top priority to the developmental programme of C-DOT and believed that there was no conflict between existing and new technology. The growth potential of telecom sector was so immense that existing technologies including C-DOT and new technology could jointly meet the ever-rising demand. C-DOT had almost successfully completed its MAX-I switch and by next year productionisation of C-DOT exchanges of 10,000 lines would make a beginning.

By and large the requirement of small and medium sized exchanges up to 10,000 lines capacity would be met by C-DOT licencees. Requirement of large capacity exchanges and trunk automatic exchanges necessary for STD would be met by Alcatel technology and new technology. C-DOT would continue to strive for development of large exchange and would be suitably absorbed in the network. Mr. Pilot said a large number of growth centres had come up with industrial development in the country over the last few years and C-DOT exchange would play a significant role in this and in rural areas. Besides, the C-DOT switch also had tremendous export potential as the technology would be most suitable and cost effective for developing countries.

**Villagers keen on phone:** Talking about the 128-port Rural Automatic Exchange (RAX), he said during his recent visit to an inaccessible village, Devil in Rajasthan, he noticed the villagers showing tremendous interest in getting telephone facilities, particularly after they saw him talking to Delhi direct using a PCO. Mr. Pilot said the villager's immediate reaction was if they get a telephone they would be able to get the police immediately in case of any dacoity or social unrest. The Minister said RAX can be easily installed in such villages and thus extend the reach of communication in the country.

**Alcatel Official on Cooperation With ITI**  
*92WT0061A Madras THE HINDU in English*  
15 Nov 91 p 12

[Article by R. Krishnan]

[Text] New Delhi, 14 November: The French telecom giant, CIT Alcatel is keen to extend all possible assistance to upgrade the switching technology capability of the

public sector Indian Telephone Industries (ITI). While Alcatel has already agreed to pass on its latest OCB 283 digital technology to ITI free of cost, future transfer of technology to ITI from the French company may not be forthcoming without a fee.

In an interview to THE HINDU, the President of the Public Switching System of CIT Alcatel in Paris, Mr. Gerard Dega said 'though we are very keen to see that ITI survived but at the same time as a business house we would also like to see our joint venture proposal with India's Dr. B.K. Modi group for the manufacture of state-of-art digital switching technology approved by the Government so that both India and France benefited from the two ventures'. An Alcatel team was already in Bangalore to discuss the details of furthering technical cooperation with ITI.

Tracing the history of cooperation with ITI, he said Alcatel had entered into an agreement with the Indian public sector way back in 1982 and an important aspect of the tieup was the intention to work closely with the Telecom Research Centre (TRC) under the Department of Telecommunications. While ten years ago, Alcatel was small today it had expanded into an international giant. Thus with its growing stature, Alcatel has also thought of increasing its presence worldwide with India being one of the important centres. Mr. Dega said Alcatel had as on date more than 70 million digital terminations (subscriber and trunk lines) installed or on order in nearly 90 countries and held 17 per cent of the worldwide market for public switching.

Referring to ITI, he said 'We have transferred progressively E-10 technology to the Indian company starting with P-8 version to P-11 version. Now we are in the process of transferring OCB 283 technology as well to the ITI totally free of cost which we have not done for any company anywhere in the world.' While the OCB 283 system had been installed a couple of months ago in Pakistan, China and Poland, in France itself the new system was being integrated into the network since the beginning of this month. In this context, he said we have found ITI extremely competent in absorbing the new technology but there were some problems which were both technology and business related.

#### **Business Hurdles**

For instance, ITI had indigenised up to 90 per cent of the component/technology and was sourcing nearly 80 per cent of the content from in house. This in the view of Alcatel was not wise and from vertical integration, there should be a shift towards sub-contracting of the component manufacturing job. One reason why ITI should not continue with its vertical integration according to Mr. Dega was that equipment relating to switching was constantly evolving unlike the electro-mechanical systems. Therefore, components required for the Electronic Switching Systems (ESS) often disappeared from the market over a period of time and they were in turn replaced by more powerful, more reliable and cheaper substitutes.

### Progress of Technology

Under the E-10 system, the technology version had progressed from P-8 to P-9 from P-9 to P-10 and today the P-11 version was in place. Moreover, while Alcatel's existing OCB 181 system offered telephone exchanges that could connect up to 40,000 subscribers and handle 1.75 lakh busy hour call attempts, the new OCB 283 technology offered telephone exchanges with a capacity of up to two lakh subscribers and eight lakh busy hour call attempts. But to move from OCB 181 to OCB 283, it would be necessary to have new signalling system as well as the latest CSN subscriber racks. It was now for ITI and the DOT to brace up quickly to absorb the new technology.

Since Alcatel was keen to keep alive its venture in India, it decided to transfer OCB 283 technology free of cost though normally it would have charged 100 million French francs (Rs. 46.3 crores). While all the hardware evolution would be transferred free of cost, some nominal fee may be charged for the software depending on the features. Though Mr. Dega said his company was very keen to see that ITI survived and progressed, it could not be a one-way traffic. 'What Alcatel was looking forward to was a simultaneous development of both its cooperation with ITI and a successful launch of the proposed joint venture with Dr. B.K. Modi group.' In a sense they would prefer a parallel development of both ITI and the new joint venture to progress side by side. According to Mr. Dega while earlier they were thinking of having 40 per cent stake in the new venture they had now revised it to 51 per cent.

### French Line of Credit

Referring to the possibility of French government extending credit to back the new developments in telecom, he said the French company had already informed the French Government that it would be keen if an official credit line of Fr. Fr. 550 millions could be opened for meeting ITI's funds requirement. In terms of distribution this would mean Fr. Fr. 300 millions for making CSN racks in five locations identified by ITI, Fr. Fr. 200 millions for purchasing equipment related to OCB 283 core system and Fr. Fr. 50 millions for technical assistance. Even after this, there would still be a need for acquiring equipment from sources other than France.

It was in this context, the visit of the Indian Commerce Minister, Mr. P. Chidambaram to Paris on 8 November to attend the Indo-French Joint Economic Commission meeting assumed importance. Though the French have agreed to extend a credit of Fr. Fr. 550 millions next year, the share meant for telecom was not more than Fr. Fr. 20 millions, a sum that will be shared by a rural communication project and Videsh Sanchar Nigam as well. According to Mr. Dega, if India had pursued the proposal put forward by Alcatel to its government, then the credit covering telecom would have been much larger. But such a request from India could come only if the Indian government had decided on the quantum of investment required to put in place the new facilities to manufacture the OCB 283 related systems. In any case, officials at Alcatel headquarters in Paris did not rule out the possibility of a fresh credit to cover the telecom

sector in case India was serious about strengthening further Indo-French cooperation in this area.

Meanwhile, Alcatel officials were sceptical of the proposed plan of ITI to set up manufacturing facilities for CSN in five places. This would not be wise they said. Referring to C-DOT and India's indigenous effort to make a new digital switch, they said Alcatel was keen to cooperate with C-DOT. Like they did in Italy where Alcatel radio technology was married to an Italian switch to evolve a cellular system, the French company was equally keen to duplicate it in India using the C-DOT switch. Talks in this context were already in progress, Mr. Dega said. But before that it would be necessary for India to choose an acceptable digital standard for mobile phones. He said, the DOT was reportedly looking for GSM system which was the accepted standard all over Europe. In case it was selected then India can deploy both the E-10 and C-DOT switch for cellular purposes. But when asked whether supply of components would not be a problem, Mr. Dega said there would be none as the U.S. telecom giant, Motorola supplied components to Alcatel as well.

### Satellite-Based Televisions in West Bengal

92WT0063A Calcutta THE TELEGRAPH in English  
7 Nov 91 p 2

[Text] Calcutta, 6 November: The Union information and broadcasting minister, Mr. Ajit Panja, yesterday switched on the satellite based regional television links, which now enables 95 per cent of the state's population to watch programmes on Doordarshan's second channel.

West Bengal is the sixth state in the country to have a satellite-based regional TV service, and the links were provided three years ahead of the schedule. Speaking at the glittering ceremony at the Netaji Indoor Stadium, Mr. Panja said it was time for Bengal too catch up with the rest of the country, and television would help to provide information entertainment and teaching aids. Replying to the chief minister, Mr. Jyoti Basu's suggestion that the state governments be given a say in programming, Mr. Panja regretted that West Bengal's representative has not attended the Doordarshan state coordination committee meeting for several years.

Striking an emotional note, Mr. Panja said Doordarshan would not invade any country the way CNN and Star TV has but "would capture the hearts of the people." Earlier, the chief minister, Mr. Jyoti Basu, said it was time to unite on certain issues, despite differences in ideology. He added that the state government would cooperate with anyone who worked in the interests of the state, and hoped that Mr. Panja would do a lot of good work for other states also.

Striking the only political note of the function, Mr. Basu said the Uttar Pradesh chief minister, Mr. Kalyan Singh, had condemned Doordarshan for biased coverage of the Ayodhya events at the recent National Integration Council meeting. "If Kalyan Singh criticised Doordarshan, then it is obvious that the coverage was unbiased," he noted.

The PCC(I) president, Mr. Siddhartha Shankar Ray, praised Doordarshan's efforts, claiming that the TV links

would put a "smile on the faces of people." He remembered that Calcutta was provided with television links in 1975 when he was the chief minister, and that the former Prime Minister, Mr. Rajiv Gandhi, ensured that Calcutta Doordarshan got a second channel.

Mr. Ray said he was happy that the TV links were inaugurated on the birth anniversary of his grandfather, Deshbandhu Chittaranjan Das, the great freedom fighter. Mr. Ray also spoke glowingly of his sacrifices. Earlier, Mr. Panja garlanded a photograph of Chittaranjan Das. The well-known film director, Mrinal Sen was present at the function.

#### **Export of Telematic Products Authorized**

92WT0039A Bombay *THE TIMES OF INDIA* in English  
31 Oct 91 p 13

[Unattributed article: "Manufacturers Allowed To Export C-DoT Products"]

[Text] New Delhi, Oct. 30—The Centre for Development of Telematics (C-DoT) has simplified the procedure for export of its products. Realising that the true export potential of its technology, especially RAX (rural automatic exchange), can only be realised if the manufacturers themselves are allowed to undertake export, it has decided to make amendments in the transfer of technology agreement it signs with them.

All manufacturers will now be allowed to export on their own, provided the royalty on exports is paid in foreign exchange. Earlier, the manufacturers were required to take prior written concurrence of C-DoT for exporting any product covered by the latter's knowhow. C-DoT also used to prescribe its own conditions for such exports. Now the manufacturer will have to pay a royalty of 4 per cent on the net sales from exports. Incidentally, the royalty for domestic sales is also the same.

Although no export of products based on C-DoT technology has taken place as yet, considerable interest has been generated among the developing countries for some of its products. It is felt that to convert this interest into real benefits, all impediments to export must be removed.

However, if the manufacturer wants to enter into a joint venture with a foreign collaborator necessitating transfer of technology, it will have to involve C-DoT with the project. This is natural since the Indian manufacturer has paid the technology fee for his use and not for transferring it to a third party, C-DoT would like to get additional technology transfer fee from the collaborator.

Another change has been brought about in the fee for manufacturers interested in both the EPABX as well as RAX technology. Earlier, an EPABX licence could upgrade in to a RAX manufacturer after paying an additional Rs 3 lakh, i.e., Rs 10 lakh for both. But now, those interested in a licence for both technologies will have to shell out Rs 20 lakh.

The fee for transfer of other technologies, however, remain the same. For the 512 port single base module exchange, it is still Rs 25 lakh, while for the central module which can go upto 10,000 lines, the fee remains Rs 50 lakh.

#### **Public Data Network Covers Eight Cities**

92WT0042A Madras *INDIAN EXPRESS* in English  
9 Oct 91 p 5

[Text] EXPRESS NEWS SERVICE, Madras, Oct 8—The Department of Telecommunications' public data network, I-NET, launched on Tuesday, will initially cater for about 100 users in Madras.

The network which covers eight major cities—Delhi, Bombay, Calcutta, Bangalore, Hyderabad, Pune and Ahmedabad and now Madras—will later cater for 25 users conforming to CCITT X.25 protocols (a series of standards developed by the International Telegraph and Telephone Consultative Committee for Message Handling Systems) and 32 other X.28 users with leased lines. Forty other X.28 users will have access to it through the public switched telephone network.

Meanwhile, the Videsh Sanchar Nigam has introduced a service that will enable subscribers to send mail electronically to users connected to mail networks in other countries.

The Gateway Electronic Mail Service, GEMS 400, will place the Indian subscriber in the X.400 message network system used extensively world-wide. Electronic mail provides for storage and transmission of messages to distant end electronic mail boxes, telex or fax subscribers. The service has the facility to transmit confirmation of messages to the mail boxes.

VSNL is organising an "awareness seminar" in the City on Wednesday in connection with the provision of the electronic mail service.

To start with, it has been connected to the MCI-Mail and ATT-Mail, USA, Gold.400 of British Telecom and Keylink.400 of Australia but it will be interconnected to other major international public electronic mail systems shortly.

A registered subscriber can use the service [to] transmit mail to electronic mail boxes, telex subscribers and fax subscribers abroad. It can be availed through the telex, telephone or packet switched data network. Electronic mail received from abroad will be stored and forwarded and fax delivery is also possible.

Initially the service will be governed by CCITT X.400 1984 recommendations. Later it will be upgraded to conform to CCITT X.400 1988 recommendations.

The service is made available through VSNL's Bombay gateway switch and its associated switches at Calcutta, Bhubaneswar, New Delhi, Madras, Trivandrum, Bangalore, Hyderabad, Poona and Ahmedabad. I-Net also has access through VSNL's gateway switch and remote access through satellite.

#### **Move To Boost Rural Telecom Network Reported**

92WT0062A Bombay *THE TIMES OF INDIA* in English  
23 Nov 91 p 3

[Text] New Delhi, 22 November (UNI): "Telecom for everyone by the year 2000 A.D." will be the slogan of the

telecommunication, the commission chairman and telecom secretary, Mr. H.P. Wagle, announced here today.

Speaking at a conference on "electronics and telecommunications in India by 2000 A.D.," Mr. Wagle said rural telecom revolution was the objective of the commission. Its goal was to provide one telephone each for every village by the turn of the century, he added.

The conference has been organised by the Capital Foundation Society.

Mr. Wagle stated that 90 per cent of the villages lacked even the basic telecom facilities and remained unconnected with the rest of the country in the last decade of the 20th century.

Coupled with this the urban areas' telecom demands could not be fully met, Mr. Wagle said, adding that this situation could be radically improved only by bringing about a revolution in the telecommunication sector.

Mr. N. Vittal, secretary, department of electronics, in his presidential address, stressed the importance of improving infrastructure in the telecom sector.

Mr. Vittal said this could be achieved through intensive research and development work which will develop the competitive edge in trade and industrial activities.

"Information technology, electronics and communication can improve the life of the common man," Mr. Vittal said, adding that the success achieved in the railway reservation system through computerisation was a case in point.

"Why not apply the same system to other areas like postal or police administration or any place where people have to interact with government officers," he said.

Mr. K.P.P. Nambiar, former secretary of the department of electronics, said that in order to establish a viable component industry, the government will have to adopt many more fiscal and industrial policies.

He called for radical changes in the customs and excise duty structure of component industry. "There is no rationale in levying import duty on raw materials and parts and capital equipment for production which are not available in this country," he noted.

Mr. Nambiar pleaded for nominal or zero duty on component industry to give it the much-needed fillip.

#### **Tata Fundamental Research Projects Reviewed**

92WT0064A Bombay *THE TIMES OF INDIA* in English  
11 Nov 91 p 5

[Text] Bombay, 10 November—A television antenna slightly broader than a matchbox (two inches by two inches) can replace the large ones now in use when they are made of high temperature superconducting material soon to be realised. Work on it is on at the Tata Institute of Fundamental Research (TIFR).

The only condition is that the miniature antenna is to be kept in liquid nitrogen to keep the temperature down (below liquid nitrogen's 77 degrees K, zero degree Kelvin

being equal to minus 273 degrees C, and the room temperature 300 K). Liquid nitrogen is easily available in the country, according to Prof. R. Vijayaraghavan, head of Solid State Physics at TIFR.

Liquid nitrogen's best application would be space ships in which the temperatures would be below 77 K to protect devices used for research as also for launching the ships, as the devices would be small, reducing the ship's weight. Its use in fast computers is also possible.

Superconducting microstrip resonators using thin film technology in the C-band microwave frequencies (4-8 Ggahertz—Gega is one kilo million hertz) have been realised for the first time in the country at TIFR. They have microwave applications like in filters and noise reduction transmission including applications to improve the TV picture and reception, with improvement of 50 to 100 times in what the engineers call signal-to-noise ratio.

Dr. R.S. Chaughule, of TIFR, one of the organisers of the symposium, giving a gist of discussions at a recent national seminar on "Current status and future directions in condensed matter physics" at the Poona University Campus, held under the joint auspices of TIFR and department of physics of the university, told TOINS that the superconductivity; magnet, would be so powerful that it could draw out a lot of impurities from the iron ore.

Thin film technology, which will enable manufacture of the mini-antenna, is one of the applications of high temperature superconductivity.

A panel discussion by scientists specialising in fields such as thin film technology, bulk materials and SQUIDS (superconducting quantum interface devices) meant for medical, geological and other applications was held as part of the symposium when recent advances in the theoretical understanding of high temperature superconductivity and the recently-observed superconductivity in  $C_{60}$  (C for carbon) molecules were noted.

The SQUIDS, said Dr. Chaughule, were extremely sensitive devices which measured minute changes of magnetic flux, and were finding applications in recording magneto-Cardiogram and brain waves. These were also used as magnetometers for studying magnetic properties of very weak magnetic materials.

D. V.K. Mishra, joint adviser to the department of science and technology, who was in the panel headed by Dr. R.M. Iyer of the Bhabha Atomic Research Centre (BARC), got to know the latest in the applications of high temperature superconductivity. He is the coordinator between the planning commission and the newly-constituted Science and Technology Board, which has replaced the apex body that looked after research, after the death of the former prime minister, Mr. Rajiv Gandhi.

The symposium will enable the planning commission to decide on the areas to which the money for research should be diverted, he told the symposium.

The areas of research and new emerging research facilities prominently discussed included the Synchrotron Radiation facility at Indore, the new Dhruva Reactor at the BARC, Bombay; Setting up low temperature facilities and helium liquefiers, laser, their present and potential applications; magnetism of new class materials such as heavy Fermion systems—alloys in which the electrons go missing and could not be counted and oxide superconductors.

NMR, it was pointed out, was one of the important tools of condensed matter physics. Apart from studying magnetic property of materials, it is used as magnetic resonance imaging device to detect diseases of the brain.

Material characterisation techniques such as Transmission Electron Microscopy (TEM), another powerful tool to study materials at atomic levels, were discussed. The TIFR using TEM is helping a Chiplun-based firm manufacturing oxides and electrodes with analysis of its materials.

Also discussed were amorphous systems and liquid crystals, a field in which the 1991 Nobel Prize was awarded to Prof de Gennes.

Heavy fermion superconductors and high  $T_c$  (transition chamber) oxide superconductors have been the focus of extensive investigations for many years, from the viewpoint of unconventional superconductivity. A common feature of these two exotic classes of superconducting materials, is that their normal state magnetic properties are intimately connected with their superconducting behaviour. In high  $T_c$  materials, superconductivity is observed from around 20 K to 125 K though the nature of superconductivity is not year clearly understood. With the discovery of superconductivity in materials based on  $C_{60}$  (another form of carbon besides graphite and diamond), the stage is set to witness an exciting phase of research in superconductivity and magnetism. Various theories of high- $T_c$  layered superconductors were discussed.

Electronic magnetism shows a wide variety of magnetic phenomena in the temperature range from as high as 1000K to as low as 0.010K in different materials. However, nuclear spin ordering is expected only in the 0.000001K region since the nuclear moments are only one thousand of those electronic moments.

Fortunately, there exist rare earth alloys such as  $PrNi_5$ ,  $PrCu_6$  (Presedonium nitorium) whose nuclear moments are enhanced through magnetic hyperfine interactions, according to Dr. Chaugule. Studies of the nuclear spins ordering will help scientists to understand the various models of magnetism since there is virtually no direct contribution from electronic spins and phonons at these temperatures. The Pr nuclear spins underwent nuclear ferromagnetic ordering below 0.00040K and efforts were being made to see the first nuclear spin glass below 0.0001K, he said.

The new Dhruva Reactor at BARC is an advanced research reactor to carry out studies in the frontier areas of nuclear science and technology. Dhruva uses metallic natural uranium as fuel and heavy water as moderator. This reactor is capable of giving a maximum neutron flux

of  $1.8 \times 10^{14}$  n/cm<sup>2</sup>/s which makes it one of the high flux research reactors in the world.

## IRAN

### TV Relay Transmitters Commissioned in Azarbayjan Province

LD0411182491 *Tehran Voice of the Islamic Republic of Iran First Program Network in Persian 1030 GMT 4 Nov 91*

[Text] Staff of the television transmitter unit of the Orumiyeh center of the Voice and Vision of the Islamic Republic of Iran have completed work on the installation of television relay transmitters for the second network, with a capacity of 10 watts, in the border region of Poldasht in northwest Azarbayjan Province. Residents of the region can now receive second network television programs on channel seven.

### Mashhad-Askhabad Telecom Link To Be Established

NC0212200691 *Tehran KEYHAN in Persian 21 Nov 91 p 3*

[Text] Telecommunication links will be established between Mashhad and Ashkhabad by the end of the current year [Iranian year ending 20 March 1992]

According to our correspondent, the agreement to establish telecommunications links between Mashhad and Askhabad was signed recently by the Turkmenistan minister of communications and the director general of telecommunications of Khorasan province.

According to the report, this agreement has been signed as part of the broadening political, scientific, economic, and cultural relations between Khorasan province and Soviet Turkmenistan. It has been agreed that by the end of this year telephone connections would be established between the two countries via the Ashkhabad-Sarakhs line to Mashhad and during Farvardin 1371 [21 March-20 April 1992] the Ahkhabad-Bajgiran-Mashhad line will be established.

According to the agreement, it has also been decided that telecommunications cables be laid between the telecommunications centers of Sarakhs-Turkmenistan and Sarakhs-Iran with at least 24 channels. The first phase of this project will be for 12 channels that will become operational by the end of the current [Iranian] year.

Of the aforementioned 12 channels, three will be in the form of FX [acronym in English] lines between Mashhad and Askhabad and will be in accordance with international standards. Six channels will be direct between Mashhad and Ashkhabad.

According to the Khorasan province telecommunications center's public relations office, it has been decided that telegraph and telex links will also be added to the telephone lines between the two countries.



**Radio Liberty Opens Bureau in Kiev***LD2911024691 Moscow TASS in English 2049 GMT  
27 Nov 91*

[Text] Moscow November 27 TASS—Today's IZVESTIYA, announcing the opening of Radio Liberty's Ukrainian programmes bureau in Kiev, quotes Roman Kupchinskiy, a new chief of the Ukrainian desk of Radio Liberty, as saying "Radio Liberty has got to take the Ukraine out of isolation in order to break through the information blockade in which the republic has found itself now".

The Ukraine now has no direct outlet to world sources of information, the newspaper points out. This question is now "particularly painful to the republic".

Now that the Ukraine has proclaimed its independence and the centre goes ahead with attempts to create a new union, an open confrontation between the media of the centre and the republic has developed in the information sphere, IZVESTIYA writes.

The newspaper quotes Kupchinskiy as saying that "I want our radio to become an instrument for the building of a Ukrainian power. Our role is to help integrate the Ukraine into Western Europe and into the world market".

**Republics Meet To Discuss Ties on Communications, TV***LD1612214291 Moscow Central Television First Program  
Network in Russian 1900 GMT 16 Dec 91*

[Report by correspondent A. Lutskey, identified by caption; from the "TV Inform" program]

[Text] [Lutskey] Today, when ties between the former union's republics are falling apart, inter-republican television communications remain among the few connecting links. Until now, the lion's share of the budget of the State Radio and Television Company is being spent on technical back-up for relaying Central Television program to all corners of the country. A meeting of heads and plenipotentiary representatives of the communication administrations of sovereign states was devoted to issues of how to carry on in conditions of the new political situation.

Are you satisfied with the results?

[V. Bulgak, Russian minister of communications, identified by caption] Yes, I am satisfied with the results. We have agreed upon and confirmed the expedience of and the need for setting up a community, a regional community [sodruzhestvo] in the field of communications. A Council of Ministers of Communications will be the supreme body there. We have agreed that the majority of republics will delegate Russia the right to represent their interests in the field of communications in the International Electro-Communication Union and in the Universal Postal Union.

[Lutskey] Are there any differences between television and the Ministry of Communications?

[Ye. Yakovlev, chairman of State Radio and Television Company, identified by caption] Not differences but complexities, so to speak, regarding our future pay within the company's budget, pay for a large number of personnel, which will be represented by heads of communications here. Herein lie difficulties. If there is a budget, there will be no differences, am I right?

[Bulgak] Yes, you are. [Video shows meeting; identification cards on the table saying "Administration of communications. Republic of Moldova," "Republic of Kyrgyzstan," "Republic of Belarus," "Republic of Tajikistan"; the interviews]

**DPA Reports Russia Wants Control of Soviet TV, Radio***LD1612195591 Hamburg DPA in German 1517 GMT  
on 16 Dec 91*

[Text] Moscow (DPA)—Russia wants to take Soviet television and radio (State Radio) under its control. According to the news agency INTERFAX, this was announced today by Yegor Yakovlev, the director of State Radio, at a meeting of his employees.

Russian President Boris Yeltsin wants to sign a decree to this effect on 27 December. About one year ago, Soviet President Mikhail Gorbachev put the television and radio under his control by means of a presidential decree.

**RSFSR Takes Over Government Communications Committee***PM1312153391 Moscow ROSSIYSKAYA GAZETA (First  
edition) in Russian 13 Dec 91 p 2*

[Article by Andrey Zhdankin under the "At First Hand" rubric: "Reliable Communications for the President of Russia"]

[Text] Reliable sources have announced that the Government Communications Committee under the USSR president (a structure which became autonomous and was removed from the KGB network after the putsch) is transferring in full to Russian Federation jurisdiction.

The Government Communications Committee is the most important and powerful instrument of state management, with a highly skilled and well-organized collective. It provides high-quality and secure communications not just within the country but also beyond its borders—with former USSR embassies, for example: It conducts radio-technical and radio-electronic intelligence, and is a leading force in formulating ciphers, methods for protecting information, and much more. It has a labor force of approximately 5,000 people.

The Government Communications Committee structure included and, of course, still includes the RSFSR [Russian Soviet Federated Socialist Republic] Government Communications Administration, which moreover was subordinate to the committee leadership. Now, the administration will be subordinate only to the RSFSR president. This is to ensure that the Russian leadership's negotiations will not end up under any kind of "public scrutiny."



The execution of RSFSR Government Communications Administration directives on organizing and providing communications for the RSFSR president will henceforth be binding on all state and nonstate organizations, enterprises, and institutions across the whole of Russian Federation territory.

Despite President Gorbachev's losing such a vital instrument, Mikhail Sergeyevich will not be left without reliable communications. A structure is being maintained within the Government Communications Committee establishment to provide the president of the former Union with personal communications which are just as high in quality and just as secure as those of sovereign Russia's leadership.

So far the question of the committee leadership remains open. It is likely that Lieutenant General and Doctor of Technical Sciences Aleksandr Vladimirovich Starovoytov, who took charge of this structure after the putsch, will be appointed to this position.

State sovereignty cannot be complete if the state does not possess the requisite instruments to guarantee and implement it. Reliable communications for the state leadership constitute one of the most important elements. Now, this problem has also been resolved.

#### **Joint-Stock TV Company Holds News Conference**

*LD2212114791 Moscow Russian Television Network  
in Russian 2100 GMT 20 Dec 91*

[From the "Vesti" newscast]

[Text] Vesti has already reported that Borovoy is to become an economic adviser to the chairman of Central TV and Radio. The press is actively discussing plans to auction off Central TV and to set up independent TV structures. This was also discussed today at a news conference held by the VKT joint-stock TV company. [Video shows selection of clips from foreign-made films; shots of Konstantin Borovoy being welcomed at a news conference, then seen seated on a platform]

[Correspondent T. Orlova, identified by caption] These were the frames which heralded the formation two years ago of a new joint-stock company, with the auspicious name Your Commercial Television [Vashe Kommercheskoye Televideniye, VKT]. I myself would say it is their's rather than our's, if the programs that are already being aired on the First Program—Businessmen's Time and Express Business Chronicle—are anything to go by. In other words, what we have is a situation in which commercial TV structures, in their quite understandable wish to make money, are working exclusively for the benefit of entrepreneurs who invest money in them. Programs for viewers continue to be made by state television alone, at the expense of the viewers themselves. Admittedly, the shareholders promised today that the situation would change. We will see what happens.

#### **Satellite Communications Set Up in Nakhodka**

*LD1712114891 Moscow TASS in English 1120 GMT  
17 Dec 91*

[Article by TASS correspondent Leonid Vinogradov]

[Text] Vladivostok December 17 TASS—The joint Soviet-British enterprise, Nakhodka-Telecom, has linked the Nakhodka free economic zone to the rest of the world by telephone communication free of charge today. Communication will be free only today while the satellite communications equipment, developed by British specialists, is being demonstrated.

The joint venture installs several such systems operating via the Aziasat commercial satellite in Nakhodka. Starting from the new year, more than 300 subscribers in the free economic zone will be able to call their partners on any continent quickly and easily and will be billed in hard currency.

The need for satellite communications in Nakhodka was recognised long ago. Firms in various European and Asian countries competed for the right to set it up in the city. The British firm, Cable and Wireless, won the contract and became a partner in the Nakhodka-Telecom joint venture.

Callers will be charged five U.S. dollars every minute. Many Soviet and foreign firms which have representatives in Nakhodka have already sent applications for installing "satellite telephones".

#### **Arctic Okrug Launches Local Television Channel**

*LD0512041891 Moscow All-Union Radio Mayak Network  
in Russian 1200 GMT 4 Dec 91*

[Text] A local television channel has begun operating in Naryn Mar, the center of Nenets Okrug. So far its programs are produced by people seconded from the okrug radio, but the plan is to set up a local television and radio company. The equipment for the Arctic television center has been acquired by the okrug executive committee from a leading Japanese firm.

#### **Pamyat Radio Station Engaged in Broadcasting**

*LD1512233791*

[Editorial Report] Moscow Russian Television Network in Russian at 2100 GMT on 15 December, in its regular "Vesti" newscast, broadcasts a two-minute item on the the Pamyat Society being engaged in broadcasting. Correspondent A. Kondulukov reports from the radio studio; the station jingle is heard and the station identifier—"the Pamyat Radio Station is on the air." Kondulukov gives the following information:

"This callsign has been heard every evening for the last six weeks on the 41, 49, and 25-meter frequencies. Having gained registration in the Russian Ministry of the Press and Mass Media, the radio station broadcasts today over virtually the whole territory of the Union as well as abroad."

A map is shown with pins indicating the parts of the world which have been reached by the station. The Pamyat Society hides the locations of its transmitters and antennae, but it is known that there is one in Orenburg and one near Moscow. There is no problem with finances—employees report that broadcasting costs come to no more than 20,000 rubles a month, and Pamyat can cover these

costs from its land cooperatives and small enterprises. Eight people work at the radio station.

Dmitriy Vasiliyev, the director of the radio station, is interviewed. He states that the main theme of the radio station is man's soul and his love for his homeland.

### 'Cyclone' Shuttle Missions To Build Medical Space Bridges

LD2112050391 Moscow Radio Moscow World Service  
in English 2300 GMT 20 Dec 91

[Text] Thanks to the Soviet-made satellite Luch, Soviet and United States experts have had a chance to discuss prospects for using space technologies for medical purposes. The linkup was a kind of dress rehearsal that preceded consulting sessions between medical workers in different parts of the planet. The Soviet-made shuttle Cyclone, that can launch as many as six satellites at a go, will have to fly a few missions to build a network of space bridges between medical centers in different countries. The network is expected to be most effective in time of natural disasters and similar catastrophes.

### Central TV To Switch to Russian Jurisdiction

PM1912114791 Moscow KOMSOMOLSKAYA PRAVDA  
in Russian 18 Dec 91 p 2

[Article by D. Babich: "K. Borovoy in Seventh Heaven: Drastic Changes at Former Central Television"]

[Text] INTERFAX reports that on 16 December Yegor Yakovlev, chairman of the All-Union Television and Radio Company, announced to his colleagues via the Ostankino internal television network the company's upcoming transfer to Russian jurisdiction. As Dmitriy Golovanov, adviser to the company president, told us, this step in no way means a merger with the Russian Television and Radio Company. To use Yakovlev's own expression, the company will remain a "hoop around the collapsing barrel" of the former Union.

The switch to Russian jurisdiction means, first, that Central Television will be subject to Russian laws only and, second, that its workers' wages will be paid out of the Russian budget. In the future it is intended to turn it into a joint-stock company. The working title for the new company is the Ostankino Television and Radio Company. A Yeltsin decree switching the television and radio company to Russian jurisdiction is expected to be signed on 27 December.

D. Golovanov confirmed the INTERFAX information that Konstantin Borovoy, president of the Russian Commodity and Raw Materials Exchange, is appointed Yakovlev's economic adviser, noting that the country's top broker will serve as consultant—"an outside expert."

The trickiest issue for Central Television and Radio is where to get the money to pay for the relaying of Central Television programs throughout the territory of the former Union. Payment for satellites, cables, and other equipment which was formerly the property of the Ministry of Communications amounts to 74 percent of all the television

and radio company's expenditure. This money was previously paid out of Union funds, but who will allocate it now?

### Structural, Cadre Changes Planned for All-Union TV

PM2312091191 Moscow IZVESTIYA (Union edition)  
in Russian 19 Dec 91 p 3

[Article by VI. Arsenyev under the rubric "TV and Us": "Television Will Be Different in the New Year"]

[Text] The Russian President's Administration is elaborating a document on the new status of the All-Union Television and Radio Company. It is perfectly possible that the company will transfer to Russian jurisdiction before January and will start the new year as a joint-stock company.

Company chairman Yegor Yakovlev met Boris Yeltsin and talked about it with him. The change in the status of a company whose head was customarily appointed by a decree from Mikhail Gorbachev was no surprise to him either in the circumstances.

Meanwhile Yegor Yakovlev has some new people in his immediate entourage. Konstantin Borovoy, director of the Russian Commodity and Raw Materials Exchange, has been invited to be an economic adviser. Vladimir Troyepolskiy, director of channel "2x2," will now be head of advertising. Finally, Igor Malashenko has been appointed the company's political director.

The post has not existed before. But, as Malashenko explains, his functions should not be associated with political censorship. He is an expert in the sphere of analysis of political situations and a candidate of philosophical sciences. Recently he has been working in the USSR president's apparatus. Previously he was in the CPSU Central Committee International Department, and before that he was at the United States and Canada Institute. He has appeared on U.S. television screens many times as a political scientist. Now he is working on a new broadcasting blueprint, in which the emphasis is on maximum objectivity in news bulletins and in-depth analysis in radio and television political programs. An analysts' council has been set up. It includes eminent political scientists capable of forecasting the development of events, not just talking about them afterwards.

In the opinion of the experts, we will be faced with an entirely new situation in the world of radio and television. Although Central Television will continue to cover life in the various regions of the former USSR, it will now be Russian as well and will compete directly with the television that already exists in the second channel. It is not yet known who the actual founders of the joint-stock company will be. But it is known that it has been promised that the subsidies allocated for 1992 by the union authorities, which are needed in order to pay the Communications Ministry's bills, will remain. Otherwise the company would simply cease to exist.

The role of the television technical center, located at Ostankino, will also be completely different, it seems. It

used to serve Central Television exclusively (although it too was the only service). In the spring the television technical center started to provide services for Russian Television. A few days ago the independent joint-stock television company decided to employ its services, including the television technical center among its founders (Konstantin Borovoy was involved in setting it up). According to IZVESTIYA's information, the television technical center is being asked to assist in broadcasting on some channels permanently, and several projects are being considered. It is hard to say what Central Television's role will be now that its monopoly is finally at an end...

### **Jamming Station Converted to Commercial TV Station**

LD0112212991 Moscow All-Union Radio First Program Radio-1 Network in Russian 1600 GMT 1 Dec 91

[Text] A station for jamming Western radio broadcasts, built in the outskirts of Bryansk several years ago, has been reequipped as a television center for commercial information, called the Shestidesyatyy Kanal [Channel Sixty] Advertising Company. Test transmissions have started. Alongside CNN news, entertainment programs, and commercials, serious broadcasts primarily aimed at supporting the transformations being conducted by the Russian Soviet Federated Socialist Republic leadership are planned for Shestidesyatyy Kanal programs.

### **New Media Law Scored by RSFSR Independent Broadcasters**

PM0212133391 Moscow ROSSIYSKAYA GAZETA (First edition) in Russian 29 Nov 91 p 1

[TASS-RIA report under the "News" rubric: "Law Criticized"]

[Text] The draft Russian Law on the Media was adopted at first reading at the RSFSR [Russian Soviet Federated Socialist Republic] Supreme Soviet of the Republic session 27 November.

At a press conference held the same day, representatives of the Russian Association of Independent Television and Radio Broadcasting severely criticized Article 32 of the new law (on the procedure for issuing licenses). In particular, this article envisages the compulsory allocation of air time by all television and radio companies for programs from the Russian radio company. However, according to Mikhail Fedotov, deputy Russian minister for the press and mass information and one of the authors of the new law, the state in any country intervenes in the work of independent companies and participates, for example, in scheduling air time.

### **Future of Central Television Discussed**

PM0412143191 Moscow IZVESTIYA (Union edition) in Russian 30 Nov 91 p 5

[Article by V.I. Arsenyev: "Which Television Should Be Considered Central Television?"]

[Text] At a recent meeting with television critics in the Central Movie Center, Yegor Yakovlev, the present leader of the All-Union State Television and Radio Company, was asked: "Is there light at the end of the tunnel?" He was surprised at the question: "Why do you believe that there is a tunnel? There is no tunnel. There is open ground..."

Of course, Yegor Vladimirovich, inclined toward metaphorical thinking, had in mind the need for fundamental changes in Central Television, starting from nothing. The previous system of activity of this enormous mechanism, which was more like a ministry than a creative organization, in his opinion was in no way consistent with the new times. The people who passed for being the kings of the air disappointed Yakovlev when he saw their work at close hand. He told his new subordinates: "Think for yourselves. Search. Do not wait for orders from above. And he was not understood. But what about the general line? he was asked. In what direction should we search?

All this is sad. Essentially we are attending the funeral of what was until recently the main and most unified central television. Actually, there is no cause for surprise—the country is disintegrating, never mind Central Television. And indeed in general the question is what television today should be considered central television? Most likely Russian television. Any day now it will be allocated an educational program channel. Disputes about the ownership of the Moscow channel will also obviously end in the City Hall's favor. St. Petersburg Television already in fact no longer belongs to Central Television. Just one channel remains. Actually, it will be unnecessary to have as many people as are now working in Ostankino, on Pyatnitskaya Street, and in Shabolovka, where the Central Television buildings are situated. And if in addition we add the drastic reduction in state subsidies compared with last year (subsidies for Russian Television are, on the contrary, increasing) it is not difficult to imagine that hard times await Central Television. It is entirely possible that Central Television will not be able, as before, to shoot feature films or prepare expensive shows. It will be simpler to buy from independent television studios, whose numbers are increasing with every passing day. Or to agree with Western partners.

Sponsors might seemingly be able to help? But that prospect is not without danger since sponsors, having completely bought up the creative associations and programs could and will—if they are given the opportunity—dictate their own conditions. Yegor Yakovlev understands that. That is why he interpreted as an insult the suggestion from K. Borovoy, leader of the Russian commodity and raw material exchange, that a joint-stock company be organized instead of the All-Union State Television and Radio Company. Yakovlev has found a way out of the complex financial situation, at least for a start, in the reforming of Central Television's advertizing service. Now the cost of one minute's advertizing on the air is entered strictly, hour by hour. At "gold" time, from 2000 through 2300 hours, it should be at least 60,000 rubles [R]. For the sake of comparison, at night from 0000 through 0600, it should be at least R10,000.

Meanwhile, it is true, a Russian association of advertizers is being created whose founders have stated their intention to monopolize the advertizing and public relations market. They intend to acquire television and radio companies, newspapers, and journals either in full or in part. In my opinion this will also complicate the life of Central Television and will lead to a war the likes of which we have never seen.

What will tomorrow's Central Television be like? I would very much like it to be no worse than Russian Television. It need not be called Central but, for instance, all-union or interrepublican (the name is not the point) as long as it is full of content. Actually, Yegor Yakovlev probably wants the same. So far, if you remember, he has always achieved the result he wants.

### RIA's Plans for NOVOSTI Takeover Examined

PM2811131791 Moscow MOSCOW NEWS in English  
No. 47, 24 Nov-1 Dec 91 p 2

[Article by Dmitriy Sidorov: "A News Agency Without Regimentation and Socialism"]

[Text] More than 4,000 staffers of the former NOVOSTI Information Agency (NIA) are to vacate its building at 4 Zubovskiy Boulevard in mid-December. The building will be taken over by the Russian Information Agency [RIA]. Unlike its predecessors (APN and NIA), the new agency will emphasize news and facts rather than ideological comments and analysis.

Director-General of the RIA is Andrey Vinogradov, 36, who worked for NOVOSTI Press Agency for 12 years. He thinks that the sluggish and carefree life of that agency is over. All Soviets working for the NOVOSTI bureaus in other countries have also been served notices of dismissal. They will soon return to Moscow. According to A. Vinogradov, many bureau chiefs sent him cables condemning the failed coup and pledging their support of democracy in a bid to secure positions in the RIA.

Coming back are also nearly one hundred Soviet spies who used the NOVOSTI press cards as their cover worldwide. Their return was negotiated by A. Vinogradov with their former KGB Chief Leonid Shebarshin. A. Vinogradov has also secured consent from the military intelligence agency. Still, the new director would like to keep some of the Soviet spies because they are really fine journalists. This is only possible if they resign from intelligence.

There is a bigger problem with regard to the sacking of a great number of foreigners who worked for NOVOSTI in many countries. They all are protected by the laws of their countries and by their unions. The RIA will have to pay them some 50 million dollars in damages. The disbanded news agency was financed from the state budget and thus it has no funds that could be used. In fact, it only earned 10 per cent of the money spent on it. A. Vinogradov is going to ask Russia's government for the dollars. He is sending a letter to this effect to Boris Yeltsin soon. He is going to set up RIA bureaus in industrial countries and regional offices in Third World countries. The new agency cannot afford 100 bureaus, as NOVOSTI could.

Only some of the former staff in Moscow will be rehired and this is going to cause serious problems. Former staffers of NOVOSTI say in leaflets pasted outside the building they are going to stage an indefinite strike in December. They demand that Andrey Vinogradov and his deputies be arrested allegedly for having caused the collapse of the prestigious news agency. The director-general is gearing up for numerous court actions. He is hopeful that his agency is not going to resemble NOVOSTI run by Valentin Falin and Albert Vlasov who only increased the staff.

### TASS Satellite System Operational 'Beginning of Next Year'

LD0412135591 Moscow TASS in English 1350 GMT  
4 Dec 91

[By TASS correspondent Andrey Palaria]

[Text] Moscow December 4 TASS—The Soviet news agency TASS, notwithstanding the fact that it has lost monopoly on the Soviet news market, does not intend to let the union Ministry of Communications to have it either.

At its radio centre near Moscow, TASS has installed two satellite communications aerials with the assistance of U.S. specialists to receive and transmit news worldwide via the international Intelsat system.

The U.S. company Vertex together with TASS specialists began to build a ground satellite communications station exactly a year ago.

There will be a third aerial intended for television needs, according to radio centre chief Vladimir Skachkov. It remains to install it and to connect it to support equipment supplied by the Italian firm Garzotto.

Vertex experts will arrive at the centre in mid-December to test the readiness of all the systems. The transceiver system is expected to become operational at the beginning of next year.

### TASS Gets New Satellite Communications Aerial

LD0812145191 Moscow Russian Television Network  
in Russian 0900 GMT 7 Dec 91

[From the "Vesti" newscast]

[Summary] Soviet and American specialists needed just 18 minutes to break the monopoly of the Union Ministry of Communications. That is the amount of time it took to install a satellite communications aerial at the TASS radio center near Moscow. The new satellite aerial is 11.3 meters in diameter. It will make it possible to receive information from and send information to virtually any place on the globe by means of two satellites of the international Intelsat system. [video shows large dish aerial, interior of radio center]

### **New Antenna for TASS Radio Center**

*LD0312235991 Moscow Radio Rossii Network in Russian  
2100 GMT 3 Dec 91*

[Text] It has taken Soviet and American specialists only 18 minutes to break the monopoly of the union Ministry of Communications; during this time an antenna for satellite communications was installed at the TASS radio center near Moscow. With the help of the American firm (Vertex) the agency employees installed the antenna, which is 11 meters in diameter. It will allow programs and information to be received from practically any point in the world via two satellites of the international Intelsat system.

### **Moscow Company Announces Cellular Phone Trials**

*PM2012135991 Moscow IZVESTIYA (Union edition)  
in Russian 18 Dec 91 p 8*

[Article by I. Andreyev: "Cellular Phones for the Capital"]

[Text] The "Moscow Cellular Communications" (MCC) Limited Liability Company has announced the 16 December start of trials for our country's first ever communications system of this kind. The founders predict that the number of MCC subscribers will reach 60,000 over the next five years. [passage omitted]

MCC's founders are the "Moscow City Telephone Network" Production Association; the Moscow Intercity and International Communications Territorial-Production Association; the American "U.S. West Inc" and the international "Millicom Incorporated"; the multisector "Microsurgery of the Eye" Science and Technology Complex; and the State Communications Development Institute. The cellular modules and switching system equipment was supplied by the Swedish "Eriksson" Company, while Finnish company "Nokia" supplied the portable and car telephone apparatus.

Although not everything is quite ready to put the system into practical operation, MCC has announced the charges for its services. There will be a monthly payment of \$50. One minute of conversation will cost the subscriber approximately 60 cents. Connection charges total \$995. Separate payments for acquiring and renting the cellular phone and for making intercity and international calls must be added to the expenses.

What is more important, the founders stress, is that according to MCC rules no less than one-third of all services will be offered by the company for rubles. Hard currency and ruble proceeds will go to develop our country's urban and rural communications infrastructure.

With regard to the outlook for cellular communications themselves, it is possible that such networks will develop in different regions of the country and merge with one another. The plan is to create a cellular phone corridor from Moscow to St. Petersburg, passing through many cities and villages en route and taking the system's final outlet into Scandinavian countries.

### **New TV Relay Station for Kharkov, Dnepropetrovsk Regions**

*PM0212150391 Moscow ROSSIYSKAYA GAZETA (First edition) in Russian 29 Nov 91 p 2*

[Unattributed report under the "Common Language" rubric]

[Text] More than 1 million residents of southern areas of the Kharkov region and several northern areas of Dnepropetrovsk Oblast can now view all television programs from Moscow and Kiev; a 250-meter television mast and powerful relay station have come into operation.

### **Satellite Phone Link for Ussuri Village**

*PM1112164591 Moscow ROSSIYSKAYA GAZETA (First edition) in Russian 7 Dec 91 p 2*

[TASS report under the "Nighttime Teletype" rubric: "Link"]

[Text] Inhabitants of the ethnic village of Krasnyy Yar in the very center of the Ussuri taiga will be able to call the rest of the country via satellite. The Maritime Kray Executive Committee earmarked over 1 million rubles for constructing the facilities for space communications deep in the taiga. The reliable communications with the region, which is inhabited by Udegei and Nanai peoples, in whose life and culture foreigners are showing great interest, create the preconditions for developing international tourism.

### **Estonia's 'Radio Mulgi' Begins Broadcasts 16 Dec**

*LD2112110391 Tallinn Radio Tallinn Network in Estonian  
0700 GMT 16 Dec 91*

[Report by Radio Mulgi Director Meelis Pirn]

[Excerpts] Radio Mulgi began its programs today at 1240 with this signature tune. [signature tune played] We want to bring the most important district events to Viljandimaa district residents. [passage omitted]

We will be on the air every working day at 1240-1300 and 1800-1820. Once we have gathered strength, we hope to increase our airtime and offer programs dealing with problems, programs for the young, and recreational programs, in addition to newscasts. We reach our listeners on medium wave 187.5m and 1,602 kHz. [passage omitted]

You can hear Vikerraadio programs on this wavelength at all other times. [passage omitted]

I would like to thank Radio Estonia, which has made it possible for us to use their mediumwave transmitter at Viiratsi. Thanks are also due to the Viljandimaa district telephone network, which has built special relay lines for us for this purpose. People of Viljandimaa district: You can listen to us every working day at 1240 and at 1800.

### **New Latvian TV Station Reported**

*LD2112134291 Riga Radio Riga Network in Latvian  
1300 GMT 6 Dec 91*

[Text] As we have already reported, the Vidzeme Television share-holding company has been founded in Valmiera. Latvian Television has assisted in its establishment.

Correspondent Gunta Matisone discussed the company's future plans with Imants Rakins, the deputy chairman of the Radio and Television Committee.

[Matisone] Should we at this moment, when we feel insecure, talk about regional television studios at all, about their development, to grant money for this?

[Rakins] It is quite clear that the practice of the world and Europe show that such regional television stations had begun to develop quite a few decades ago in the more developed countries of Europe. Recently, when I was at the opening of the Baltic Media center, on Bornholm, Denmark, we discussed this subject thoroughly. In practically all the small European countries there are already such regional, or, as they are formulated here, self-government television stations; this process has begun here as well.

First, this is necessary in order to sufficiently inform on the spot one's own local inhabitants about the events in their region.

Second, in order that those means which are at the disposal of our, the Latvian Television could be utilized more rationally, because the present-time economic crisis in itself very much affects as the prices of gas, so the state of the motor vehicle pool, and so on.

Third, it is also that the experience of the Latgale Television, on the whole, viewing it strategically, shows that in a comparatively short time it is possible to accomplish a

great deal. Therefore I am also for the idea of several rayons in Latvia combining, that way they can by joint efforts accomplish what is difficult for one rayon.

[Matisone] So then, Vidzeme Television has been founded today, in addition to the Latgale Television. Will there be any more similar formations? Or will you be satisfied for the time being with these two?

[Radins] In the draft Law on Radio and Television it is stated that the Radio and Television Committee or television separately must promote the development of regional television stations. How are we able to promote? We can promote in two directions. First, by our technical assistance. Secondly, well, by assisting both journalists and technical workers to learn. But we are not able to do this for all the rayons separately, we are able to do this only for such regional television stations. I think for the present the Latgale Television, the Vidzeme Television and, let us say conditionally the Kurzeme Television based on the Liepaja Television, would be sufficient for the start.

[Matisone] As I understand from what you said today these regional television stations will be seen by viewers in the entire republic.

[Rakins] All the programs will specifically contain only those materials which we shall jointly agree on, on the basis of an agreement, materials which may interest the audience of all the viewers of Latvia.

## REGIONAL AFFAIRS

### European HDTV Equipment To Be Tested in 1992

91AN0545X Rijswijk POLYTECHNISCH WEEKBLAD  
in Dutch 5 Sep 91 p 1

[Article by Bart Stam: "High-Definition Television Sets To Be Tested During 1992 Olympics"]

[Text] The European manufacturers participating in the European HDTV [High-Definition Television] project will test 1,000 special HD-MAC [high-definition multiplexed analog component] receivers during the 1992 Olympics in Barcelona. The equipment will be supplied primarily by Philips (Netherlands), Thomson (France), and Nokia (Finland).

The HD-MAC receivers are not intended for the commercial market, they are in fact just prototypes developed for trial purposes. These prototypes will gradually come off the production line as of November 1991. According to P.W. Boegels, who is working as an HDTV specialist for Philips, the actual HD-MAC receivers will become available to the general public from 1994 onwards. He thinks that it is important to know whether viewers having a D2-MAC [Definition 2 Multiplexed Analog Component] compatible set will be able to receive the HD-MAC signals. He made these statements during the International Radio Exhibition (IFA) in Berlin.

Since 1986, some 32 manufacturers, research institutes, broadcasting corporations, and television and film producers have been cooperating in the EU-95 EUREKA project for the development of high-definition television in Europe. D2-MAC is the intermediate step toward the final introduction of HDTV. This year, several electronics companies started marketing their special D2-MAC receivers to the general public.

Boegels also said that the European consumer electronics industry is busily developing HDTV equipment for applications other than television programs. According to Boegels, these developments involve standards for multimedia applications. "The combination of HDTV with CD-ROM (read-only memory) or CD-I (interactive) is one possible option. The new generation of HD-MAC laser disks is on its way," says Boegels.

#### Olympics

According to M. Oudin, general manager of the Vision 1250 European economic interest group, about 100 hours of television recordings will have to be produced in HDTV by the end of 1991. One year later, the share of HDTV recordings should increase to about 1,000 hours. The Brussels-based Vision 1250 group coordinates the activities of companies, of the European Broadcasting Union (EBU), and of commercial and state-controlled broadcasting organizations. Major events to be recorded in HDTV next year include the Winter and Summer Olympics and the World Exhibition in Seville.

In the meantime, the German city of Oberhausen boasts a very sophisticated studio for the production of HDTV

programs. The purpose is to allow producers from all over Europe to gain experience with the new medium.

## DENMARK

### EC Funds Approved for Telecommunications Research

92WT0032A Copenhagen BERLINGSKE TIDENDE  
in Danish 7 Nov 91 p 1

[Article by Asbjorn Jorgensen: "120 Million Kroner for Telecommunications"—first paragraph is BERLINGSKE TIDENDE introduction]

[Text] EC funds: Danish businesses will get a nice chunk of European funds for research into future electronic services.

The first pool of funds from the EC's third research program is about to become available for distribution.

Currently it looks as though there will be a nice chunk for Danish companies—somewhere between 120 and 150 million kroner over the next three years just for research into future telecommunications services.

"These programs have a very practical orientation. They have consequently greater interest for Danish industry compared to the long-term technical development programs," said Jens Tarstrup. He is a member of the committee that selects research projects for the EC Commission.

#### Telecommunications Funding

A fully detailed division of the five billion kroner is not yet available. The funds represent the share of the third research program designated for telecommunications.

"It is fortunate for Danish companies to be a part of the more practically oriented projects. It is here that the future lies," said Jens Tarstrup.

One of the major winners in the third research program is Espri, which does basic research in microelectronic processors, etc. This company will claim 10 billion kroner in funding in the next couple of weeks.

### Firms To Compete for GSM Market as System Starts

92WT0032B Copenhagen BERLINGSKE TIDENDE  
in Danish 4 Nov 91 Sec III p 5

[Article by Asbjorn Jorgensen: "Ready for Battle Over the Telephone of the Future"—first paragraph is BERLINGSKE TIDENDE introduction]

[Text] Mobile telephone: In March the new advanced mobile telephone system will be launched. The two companies will not compete over net or prices. The possibilities for consumers will be enormous.

Copenhagen and the larger towns will be the arena when Teledanmark and Dansk Mobiltelefon go into the clinch over Danish mobile telephones. But it will be boxing with

helmets, mouth guards, and an excess amount of foam-rubber padding inside the gloves.

In fact, the two companies will not use the means that packs the most punch: price. Further, they both claim they would like to work together in establishing a sendmaster and similar things. The operational nets of the two will overlap one another.

The new mobile telephone system is called GSM—short for Groupe Special Mobile or Global System of Mobile Communication. GSM is digitally the opposite of the analog NMT system we know. Digital means that the sound quality is perfect, that data can be transferred more easily in the air, and that the system can be used everywhere in Europe, later possibly throughout the entire world.

For the first time, the state-owned telephone companies in the Teledanmark concern are getting direct competition in a new area, and for the first time, two totally parallel systems will be developed.

Teledanmark Mobil A/S is the name of the state-owned firm. Dansk Mobiltelefon I/S is the name of the private firm, owned by GN Store Nord, Kryolitselskabet, the American Bell South, Swedish Volvo, and SAS.

The private firm has put itself forward most aggressively. One management team is already hired and functioning, people are being hired with extraordinary speed, and the development of the new system is aggressive.

On 1 March 1992, Danes will be able to purchase GSM telephones at Dansk Mobiltelefon dealers—and use them in the greater Copenhagen area. Before the end of 1992, the GSM net will cover an area corresponding to two-thirds of the population of Denmark—the big 'H' seen on the map. Two years later it will cover an area corresponding to 98 percent of the population.

The public company, Teledanmark, has plans almost as aggressive. Here, also, March is seen as the moment when the telephones will actually be on sale for use in the greater Copenhagen area. By the middle of 1993, the 'H' will be covered. At that time, Teledanmark will decide how quickly the last expansion will occur. By the end of 1994 at the latest, 90 percent of the country will be supplied, and Teledanmark says that demand will help to determine how quickly the net is expanded.

### Competition for Service

Despite the difference in the speed of development and even though both operators call the expansion of the net a competitive parameter, this part of the competition is minimal.

Neither believe in a GSM buying boom in the first couple of years. By far the majority of customers have use for a telephone that works and not for a technical wonder. The existing NMT system works and the price for the old and the new system is the same. Consequently, the definitive area of competition in the long run will be service, capability, and marketing.

Both companies are agreed that the dealer link can be used competitively. But neither says they will demand exclusive contracts with their dealers. The question is how intense the competition will be on capability.

The GSM system, of necessity, is the same world over. This means that suppliers manufacture telephones and other equipment according to completely identical specifications. All GSM systems do the same things.

Managing Director Ole Mikkelsen, Dansk Mobiltelefon:

"Our GSM system, to start with, can only be used as a telephone. But all the areas in which a modem has been used up until now are potential realities. First we must discover the needs of our consumer groups."

Managing Director Jorgen Lindegaard, Teledanmark Mobil:

"In the beginning, the publicly owned GSM system will have no more features than NMT. But then data services will be introduced."

Both companies have their eye on the export market. The Teledanmark companies already have significant export activities and have formed an alliance with their Nordic sister companies. The privately owned Dansk Mobiltelefon has potential, among other things, in the fact that owners can rapidly form new companies for specific projects and because Bell South is a firm with a large stake in export.

At the international level, "roaming" agreements are a bigger problem for the moment. The GSM system must cover Europe. One should be able to use the telephone and the little ID card which can be inserted into telephones in other countries so as to make them one's own.

This means that both Danish companies must have mutual agreements with companies in each of the European nations.

Neither of them will disclose who they are negotiating with. Nevertheless, negotiations are proceeding under high pressure. These agreements are said to be important; the image of GSM as international is to be utilized in marketing.

GSM was delayed a year because of requirements for identical specifications. These requirements delayed the production of telephones. But the basic GSM technique has been realized beyond a doubt.

In addition to perfect sound and the possibility of putting the telephone directly into a portable computer, it is essential that the user is independent of the terminal—that is to say, that subscription is determined by the little card one puts into the telephone.

Mobile telephoning and accessory services are being predicted as one of the truly big growth markets in telecommunications in the coming years.



## FRANCE

### La Cinq TV Station Facing Financial Crisis; Cuts Staff

LD1712224191 Paris Antenne-2 Television Network  
in French 1900 GMT 17 Dec 91

[Excerpts] More than 500 job cuts have been announced at our colleague station La Cinq: The management has just announced that it is to part with more than two-thirds of the station's staff. La Cinq faces losses of a little over 1.1 million francs; in other words, double its estimates.

Investigations at the station, which is in complete disarray, were carried out by Patricia Charnelet and Georges Hansen:

[Charnelet] The worst has happened for the staff of La Cinq. Even the most pessimistic had not dared put forward such a large figure: Out of 820 people, 576 are to be dismissed. [passage omitted] Only 244 will remain, including 27 journalists. The news is due to be very heavily cut—it is rumored that there will be no 2000 [1900 GMT] newscast. [passage omitted]

### Matra Launches Industrial Videophone

92AN0007X Paris ELECTRONIQUE INTERNATIONAL  
HEBDO in French 26 Sep 91 p 2

[Text] Built by Matra Communication, a French videophone called "Visages" is now ready for industrial production.

Its price of 80,000 French francs [Fr] will limit its applications to purely business ones. "Our ambition is to position ourselves in the videophone market without delay," says Matra Communication Vice President and Managing Director Jacques Payer. Matra Communication has chosen to face the Japanese with a first-generation videophone: a cathode-ray tube monitor, a digital telephone terminal, and a three-card coder-decoder (codec).

The terminal stems from the pooled competences of both the National Center for Telecommunications Studies (CNET) and Matra Communication. Officially launched in early 1987 but in the CNET plans since the early eighties, the "Visages" project was initially aimed at developing the elements required for a transmission service for data, sound, and color pictures along the integrated services digital network (ISDN). The project required an investment of some Fr100 million over 10 years. Matra Communication acquired the "Visages" license in 1989 and the ensuing cooperation enabled the industrial teams to master the video codec technology, the bulk of research work having centered around the development of image compression-decompression algorithms.

The results are here today. The videophone will be produced at the Douarnenez factory and the manufacturer insists that "this factory is now equipped to produce the terminal in runs of several thousands."

In the longer term, Matra Communication is to upgrade this technology (especially the integration of codec functions into a component) to lower its price and position it in the retail market.

The videophone is one of France Telecom's great challenges and it aims to offer videophone terminals at under Fr5,000 by 1995.

### Philips's D2-MAC Decoder Described

91AN0563X Paris ELECTRONIQUE INTERNATIONAL  
HEBDO in French 19 Sep 91 p 21

[Article by Elisabeth Feder: "Definition 2 Multiplexed Analog Component: Almost as Easy To Decode as Secam"]

[Text] Philips wishes to rival ITT Semiconductors on the market for integrated circuits designed to decode D2-MAC [Definition 2 Multiplexed Analog Component] signals.

With a view to the manufacture of low-cost TV receivers which are compatible with the intermediate D2-MAC standard, Philips' semiconductors division is developing a low-cost unit for decoding audio and video signals. This decoder, based on two circuits, is the second generation designed by Philips (the first generation, marketed last year, was a universal unit able to decode all variations of the MAC standard). With this set of circuits, which is designed for an analog environment but is able to adapt to either a 4/3 or a 16/9 format, Philips considers itself able to offer a better price/performance ratio than the D2-MAC decoder developed by ITT Semiconductors, a unit which is basically designed to work in the digital environment of the latter company's Digit 2000 circuit series.

Samples are planned for next spring and production should begin during the second half of the year.

The development of this set of circuits is currently being carried out under the responsibility of Philips' applications center in Southampton, UK, in cooperation with the Norwegian company Nordic VLSI, with which Philips had already worked on its first-generation D2-MAC decoder. The various necessary functions have been divided logically between the two integrated circuits, referred to as SAA1760 and SAA1770. The first circuit handles image decompression and decoding as well as clock and data regeneration. Data acquisition and processing, among other functions, are performed by the second circuit, which takes care of synchronization, 625-line processing, frame processing, and sound processing. The two-way link between the two circuits is designed to make them appear to be a single peripheral unit, programmable through an I<sup>2</sup>C bus directly linked to the SAA1770.

The baseband D2-MAC signal which arrives at the video input of the SAA1760 component is digitized over 8 bits, decompressed, and decoded if necessary. After the filtering and digital/analog conversion stage, two analog YUV [expansion not given] outputs are available. One is a MAC output which can, for example, be linked to a PAL [Phase Alternation Line] or Secam encoder to generate the signals needed by a video recorder. The other output can be

multiplexed with a YUV signal from another decoder or analog source, which is an interesting option for multistandard receivers equipped with a single RGB (red-green-blue) signal processing unit. The SAA1770 rebuilds the packets of D2-MAC data. The sound decoding system, with three acquisition channels, including two in stereo, allows various mixing methods or multiple-language broadcasting.

## GERMANY

### Digital Communications Net Expansion Announced

92GE0097D Frankfurt/Main FRANKFURTER  
ALLGEMEINE in German 18 Nov 91 p 17

[Article signed "kru.": "High-Speed Roads of the Future"—Wide-Band Integrated Services Digital Network Pilot Project: The Post Office Is Betting on the Euronetwork"]

[Text] Frankfurt, 17 Nov—The expansion of the network with ISDN (Integrated Services Digital Network) by Telekom of the German Post Office is supposed to cover all of the old laender by the end of 1993. And the first ISDN connections can be made in the new laender before the end of this year. This was announced by Christian Schwarz-Schilling, federal minister for post and telecommunications, at this year's ISDN Congress in Frankfurt. It is expected that the expansion of the network will be completed in the new laender by the end of 1995.

In the future, ISDN will be the uniform telecommunications network for all services. Telephone, text, data, and image communications, which today are still handled in part through other networks (such as the Telex network, for example), can then be propagated through this one network. The most important feature of ISDN is the digital link from participant to participant.

The system was introduced in the FRG in 1987 and 1988 in the scope of a pilot project. At the beginning of 1989, the commercial operations of ISDN were introduced in the eight large cities, Berlin, Duesseldorf, Frankfurt/Main, Hamburg, Hannover, Munich, Nuremberg, and Stuttgart. Since the spring of 1989, it has been possible to utilize the applications support of the German Post Telekom, says Manfred Zeller, head of the special department ISDN Applications for the General Directorate of Telekom. The focus of the applications development is close cooperation between users, producers, system developers, and Telekom. The ISDN applications development and promotion serve to scout out applications worthy of support, to define applicable projects together with participants, and to provide financial and personnel support to the user in the implementation of an ISDN project. The support is linked to several conditions, which Zeller explains: the project must be innovative and demonstrate the capacity of ISDN, it must be commercially realistic, and the utility of the respective application must also be apparent for other market segments.

The German ISDN network is now linked with foreign countries as well—with France, England, Italy, Belgium, the Netherlands, Denmark, Japan, and the United States.

Links with Sweden, Hong Kong, and Singapore are planned for the near future, Schwarz-Schilling reports.

In the view of Schwarz-Schilling, a decisive expansion of the market will be achieved through the realization of Euro-ISDN. A total of 26 network participants from 20 countries are preparing a uniform Euro-ISDN with identical services and interfaces. The system is to be implemented by 1993. Later, the postal minister expects, the supply of terminals in international competition, for example, will increase dramatically. This also creates the preconditions for a high degree of acceptance and solid growth.

Today the rapid further development of information technology is already making applications with high transmission speeds increasingly necessary. Therefore, in addition to the extension of the 64-kbit/s [kilobits per second]-ISDN, the German Post Office is also preparing a wide-band ISDN as a pilot project for 1994. Initially dedicated connections are to be offered and then dial connections at the end of 1994. Links with foreign countries are also to be realized in the last phase at the beginning of 1995. With this wide-band ISDN, which the Post Office designates as high-speed roads of the future, the data transmission rate will increase to more than 100 Mbit/s [megabits per second].

### Radio, Television Frequencies Determined in Thuringia

LD1512115291 Berlin ADN in German 1603 GMT  
10 Dec 91

[Text] Erfurt (ADN)—The future frequencies for radio and television in Thuringia have now been allocated. The Erfurt cabinet agreed on a paper to this effect today. The Central German Broadcasting Corporation will get 18 FM, two medium wave radio, and 10 television frequencies.

The distribution proceeds a frequency conference with various tenders. In 10 cases there are clashes between the Central German Broadcasting Corporation and private radio stations for frequencies.

The frequencies for the youth station, DT 64, will in the future be reserved for private radio. For the time being there will therefore be no broadcasts on this frequency as the license will only be granted next year following the naming of the director of the Thuringian Land company for private radio.

Five tenders have been received to run a private television station and 10 people or groups have applied to run a radio station. The Thuringian Land company for private radio has received a total of 16 VHF radio and six television frequencies.

In the Saalfeld area, ZDF was given a frequency to guarantee good reception of the channel there.

**Deutschlandsender-Kultur Acquires RIAS News,  
Press Review**

*LD2012145991 Berlin ADN in German 1343 GMT  
20 Dec 91*

[Text] Berlin (ADN)—RIAS (Radio in the American Sector) Berlin announced today that Deutschlandsender-Kultur (DS-Kultur) will take over both the news produced by RIAS Berlin and the station's two press reviews beginning 1 January 1992 at 0500 hours. This means RIAS news can be heard both in the new federal states and in parts of Hesse, Lower Saxony, Bavaria and Schleswig-Holstein. DS-Kultur will broadcast RIAS news on the half-hour every hour.

DS-Kultur will continue to broadcast under the joint management of ZDF and ARD after 31 December.

**GREECE**

**New Chairman of Radio and Television Board**

*NC0512214091 Athens Elliniki Radhiofonia Radio  
Network in Greek 1230 GMT 5 Dec 91*

[Text] The new chairman of the board for Hellenic Radio and Television [ERT] will be the manager Vasilis Silivridhis. Viron Polidhoras, deputy minister to the prime minister, elected Silivridhis after three persons were nominated according to the law by the National Council of Television. In a statement, Polidhoras said that Silivridhis was elected as chairman of the board of ERT because he is a successful manager, good in management and finance, and knows the market well. He said: This selection aims to rescue and upgrade ERT, particularly the quality of its programs. Professor Nikolaos Galetas was elected vice chairman of the board. Thessaloniki University Professor Ioannis Kondoleon was elected member of the executing committee.

Polidhoras will accompany the new chairman and vice chairman of the board to the building of Hellenic Radio and Television to meet with the directors.

**SWEDEN**

**New Television Channel To Begin Test  
Transmissions**

*LD3011190191 Stockholm Sveriges Radio Network  
in Swedish 2100 GMT 28 Nov 91*

[Text] Test transmissions on the third land-based television channel—TV 4—will start on 2 December. The test transmissions will take place over 14 transmitters in the big city areas. Regular transmissions on the new land-based channel will start in March 1992 and are expected to reach their full extent in July 1993.

**TURKEY**

**Country To Manufacture 'Microsatellite'**

*NC2911093091 Istanbul CUMHURIYET in Turkish  
24 Nov 91 pp 1, 19*

[Article by Tayfun Gonullu: "The PTT Is Manufacturing a Rescue Satellite"]

[Excerpt] The Turkish Post, Telephone, and Telegraph Administration [PTT] is working on a "microsatellite" as well as the two Turksat project satellites. Its launch will create a new dimension in rescue operations. At the end of research, started at the beginning of 1991, it was decided to use the microsatellite, which will weigh 250 kg, to study the earth's surface within Turkey's borders and in rescue operations. It has been reported that a credit of DM1.7 million may be used to produce the satellite, which will be launched in an Ariane-4 rocket during the first half of 1994. [passage omitted]

**New TV Relay Stations Commissioned**

*TA3011121891 Ankara Turkiye Radyolari Network  
in Turkish 2100 GMT 25 Nov 91*

[Text] TV-2 relay stations in Usak's Alabag, Bilecik's Inhisar, Bursa's Kapakli, and Erzincan's Catalarmut have been commissioned.

**UNITED KINGDOM**

**British Telecom Signs European VSAT Agreement**

*92WS0082Y Maidenhead TELEFACTS in English Sep 91  
p 3*

[Unattributed article: "New European Very Small Aperture Terminal Agreements Signed by British Telecom"]

[Text] United Kingdom—BT [British Telecom], France Telecom, Telecom Denmark and RTT Belgium have signed agreements to offer and support each other's VSAT [Very Small Aperture Terminal] services in their respective countries, in anticipation of future growth. Customers of the four companies will therefore receive the technological benefits offered by all three carriers whilst being allied to only one.

BT's VSAT systems enable the rapid transmission of data from a company's mainframe computer to any number of sites beneath the footprint of the satellite. The data is transmitted from the mainframe to a central hub at the London Teleport, uplinked to a satellite and downlinked to small dish aerials at customers' sites.

The agreement comes at a time when regulatory frameworks in most Western European countries are being re-assessed and carriers are looking to benefit their customers by signing bilateral agreements. BT hopes to reach further agreements with Western and Eastern European countries by the end of 1991.